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This is always uniform in strength, and, as the above-mentioned dietary articles are growing in favour, will command a ready sale.

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„ Ginger	4s. „	3s. 6d. „	„ Orange	3s. 6d. „	3s. „
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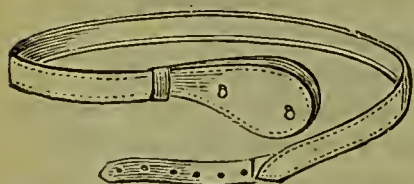


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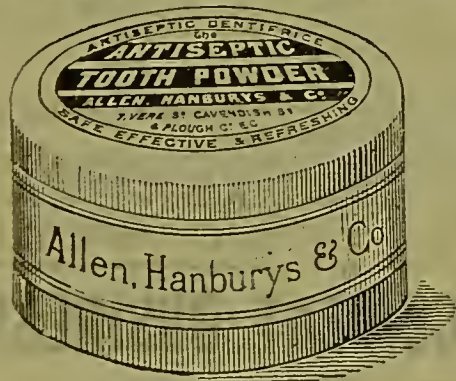
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Large double soda-water machine, by Hayward Tyler & Co., on strong cast-iron frame, complete, with two 16 gallon cylinders, two $2\frac{1}{2}$ -inch pumps, and fitted with pressure end water gauges, water tanks, and fast and loose pulleys; in good working order; price 60l. Apply to Favarger & Co., 76 Turnmill Street, London, E.C.

Shop Fittings.

Bent plate-glass counter-case, lined, open at back, 22 in. long, 9 in. high; first P.O. for 12s. has it; Norman's pill-coater. M., 713 Old Kent Road.

Mahogany counter-case, second hand, bent plate-glass, 3 ft. 6 in. long, 2 ft. wide, 8 in. deep, with 3 trays, show stand, and mirror back, 8 in. high; offers wanted. Hebblethwaite, Chemist, Draypool, Hull.

Drawers, several nests, various lengths; also bent-glass counter cases, desks, dispensing-screens, counters and shop-fittings of every description. Great bargains at Philip Josephs', 54 Old Street, Goswell Road, London, E.C.

Shop-fittings, consisting of wall, counter, tooth-brush, desk, and other show-cases, dispensing-screens, counters, drawers, mirrors, specie-jars, carboys, shop-rounds, ointment-jars, pill-machines, marble slabs; also window-fittings, glass shelves, and a variety of other articles; half price; easy payments on hire. Natali & Co., 184 Aldersgate Street (nearly opposite Maw's).

Miscellaneous.

On sale, 10 second-hand oil-tanks, holding 60 to 120 gallons. J. C. Arnfield, Stockport.

Choice foreign cigars, 12s. 6d. 100; cost 24s. John Slater, Beeston Hill, Leeds.

5l. worth of 1½d. and 3l. worth of 3d. patent-medicine stamps; 5 per cent. discount allowed, or best offer. 3/9.

Riley steam corker with syrup pump, in good working order. Apply, Sutherland, 17 High Street, Elgin.

100 pairs of spectacles, to retail from 1s. 6d. to 5s. 6d.; many pebbles in; for lot, 50s. Ingliss, Osmaston Road, Derby.

Gasometer, in fair condition, holding 20 gallons of gas; useful for manufacturing chemists, dentists, or anyone using or making their own gas; price, 1l. 10s. E. Miles, 39 Finsbury Circus, London, E.C.

Pindar's rotary pill-machine and press, cost 10l. 10s., price 7l. 10s.; Woolfall's varnish paints, in 10-gallon casks, Indian red, black, green (cost 8s. 6d. gal.), white (10s. 6d. gal.); cash offers for all or any. Palmer, Chemist, Lynn.

Maw's shop lamp and bracket, fig. 9, glazed in ruby glass; 4l. Crawshaw's 6d. dyes; 5-grain pill machine; Leath & Ross's homœopathic medicine case, containing 40 1s. and 50 6d. medicines, and 8 externals; what offers? Wanted, 2 doz. pint globe stoppered bottles, white; 3-grain pill machine. West, Hull.

Microscopic objects, 5s. doz.; thousands of gorgeous polarising, brilliant opaque, &c., all on 3 by 1 slips, ground edges: list sent; 48 sent postage paid for 21s., to Belgium, France, Germany, India, United States, and all British Colonies; natural history books wanted in exchange. Henry Kbbage, 344 Caledonian Road, London.

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WANTED.

Eclectica, Gordon's extract. Mickle, Chemist, Liverpool.

Shop-fittings of all descriptions. Particulars to Natali, 184 Aldersgate Street, E.C.

Shop counter; give full description, lowest price, to Jeacock, Chemist, Lowestoft.

Myers' cattle spice. State quantity and lowest price to J. W. W., 8 Bonlivards, Halifax.

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"Organic Chemistry"; British Pharmacopœia, 1885; Carter, Hooper, Tanner on Diseases. Ilkerton Road Pharmacy, Nottingham.

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Old gold, dental metals; goods exchanged or bought for cash, or high-class mechanical work. Eatwisle, 39 Shaw Street, Liverpool.

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Major R. Piper, residing most likely suburbs London; tall, stout, very familiar. Please communicate with De Faye, Chemist, Jersey. Dr. R. Irvine, formerly of Steyning, Sussex, and late of 51 Wellington Street, Woolwich. Kindly reply to Huron, Chemist, 10 Hatton Garden, E.C.

THE CHEMIST & DRUGGIST SUPPLEMENT.

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Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, MAY 18, 1889.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

OFFICES: 42 CANNON ST., LONDON, E.C.

IMPORTANT.

"THE CHEMIST AND DRUGGIST" SUPPLEMENT, to be published on Saturday next, May 25th, will have a bona-fide Circulation of not less than **10,000 COPIES**. Chemists desirous of purchasing or disposing of a Business, or in want of Assistants, or Assistants requiring Situations, should take advantage of this opportunity, as the circulation of this medium is the largest of any in the Drug Trade. Copy of Advertisement, with remittance, should be sent by Thursday, May 23rd, but we can take advertisements by First Post on Friday morning.

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WANTED, a Youth who has had some experience in Druggists' Smudries; good handwriting indispensable. Apply, Y 563, Messrs. Deacon's, Leadenhall Street, E.C.

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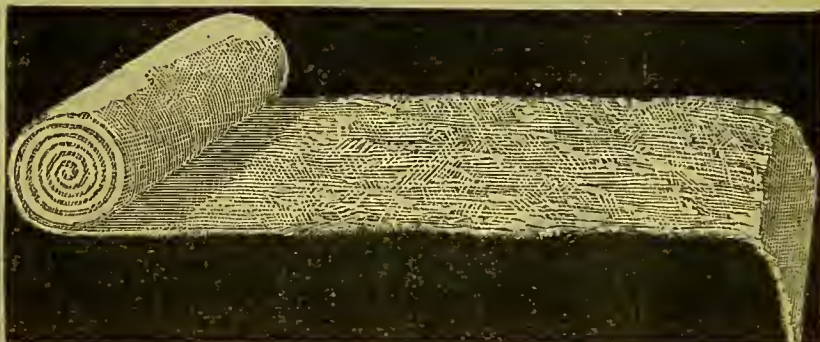
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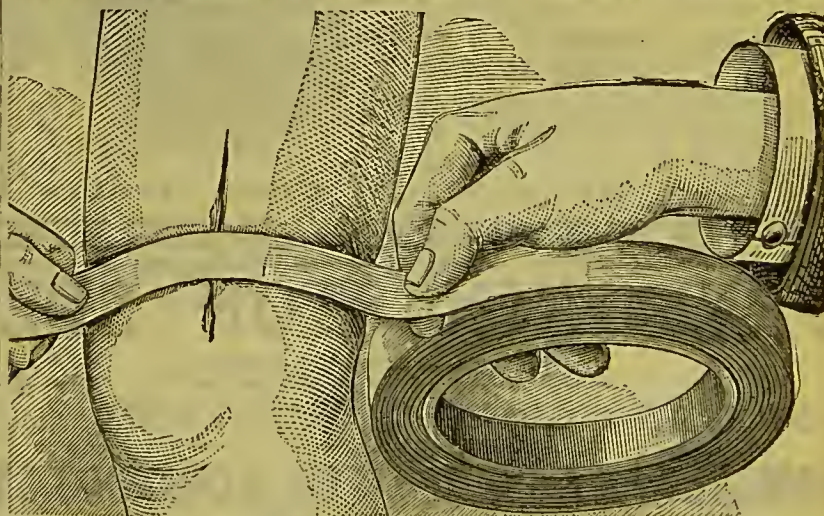
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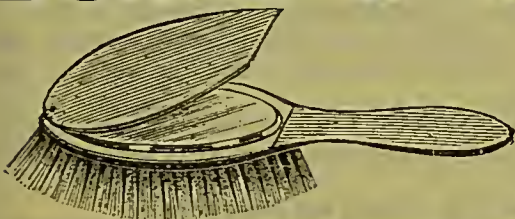
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SEE INDEX, PAGES 45-47.

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ORIENTAL AROMATIC SALTS, FOR BATH AND TOILET PURPOSES.



The ORIENTAL AROMATIC SALTS, when dissolved, render the water very soft, and impart a most agreeable and refreshing perfume that can be diffused with advantage in a room where the air is close and depressing.

The ORIENTAL AROMATIC SALTS strengthen the tissues, perfume and invigorate the body, preserving it from contagious diseases, and cleanse the pores, thus facilitating the cutaneous transpiration so necessary to life.

The ORIENTAL AROMATIC SALTS are unrivalled for beautifying and preserving the Skin, rendering it soft and velvet-like; and for keeping the complexion perfectly bright and clear.

They are indispensable in the Bath as well as in the Bedroom, and should be used by everybody. In most cases of Skin Diseases these Salts will be found invaluable.

Sold in Bottles at 1/6. Wholesale of the Patentees and Manufacturers—

S. TRAVADO & CO., 27 Jewry St., E.C., LONDON.

To be had also of Messrs. BREIDENBACH & CO., Perfumers to the Queen, 157b NEW BOND STREET, W.

PATRONISED BY HER MAJESTY.

BARBER'S ORIGINAL CRIMSON MARKING INK,

WHICH IS CHANGED BY HEAT TO A JET BLACK.

Put up for Retail Sale in 6d., 1s., 2s., 2s. 6d., and 5s. Bottles.

Also Barber's Concentrated Liquid COCHINEAL, for Colouring Jellies, Custards, &c.

Put up in 6d. and 1s. Bottles.

Also Barber's Artificial Ivory for Filling Decayed Teeth, 1/- per packet.

MANUFACTURED ONLY BY THE PROPRIETORS—

G. BARBER & CO., Club Moor, LIVERPOOL.

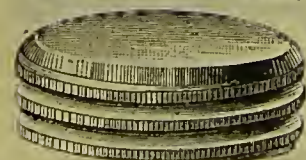
Can be obtained through any of the Wholesale Firms in Great Britain, or from FELTON, GRIMWADE & CO. Melbourne; ELLIOT BROS., Sydney and Brisbane; KEMP HORNE, PROSSER & CO., Dunedin and Auckland; FELTON, GRIMWADE & CO., Wellington; or direct from the Manufacturers—G. BARBER & CO., Club Moor, Liverpool, England.



METAL BOTTLE CAPS
AND
SCREWED BOTTLES.

For Paints, Perfumes, Soaps, Creams, Oils, and all Fluid or Semi-Fluid Substances.

PERFUME
SPRINKLERS
AND
BOTTLES.



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MANUFACTURERS,

VICTORIA WORKS, VICTORIA GARDENS, NOTTING HILL GATE,
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TELEGRAPHIC ADDRESS—"COLLAPSIBLE LONDON,"

ESTABLISHED 1820



A STICKY FLY PAPER

Is clearly going to be the thing of the future, and

WILSON'S PATENT

Are bound to take the lead, as they afford such satisfaction and delight to consumers, being immediately covered with a dense mass of flies when opened out. Dealers, too, discover to their amazement that they require no pushing whatever—simply letting go, when, like a mountain stream, the trade goes briskly on, gathering volume on its way. **TEN** of these papers are used in the time that **ONE** of the old sort was lying about, and **TEN** times the number of people use them, as the flies spare nobody, and Grocers, Confectioners, Butchers, Bakers, Milk Dealers, and Greengrocers, who suffer most, dare not have dead poisoned flies lying over their stock. The papers are as clean to handle as a sheet of note-paper, and are packed in a thoroughly respectable manner, making them fit to be sold in the best establishments.

There is no price marked upon them, but the proprietor considers that a halfpenny is a good charge to make, as the consumption is so very free.

The price to retailers is 4/6 per gross; 10 gross, 4/; to Wholesale Dealers, 25 gross, 3/6; 50 gross, 3/ net, carriage paid. 5 per cent. may be deducted for cash with order.

WHOLESALE LONDON DEPOT—

MR. H. C. QUELCH, St. Paul's Chambers, Ludgate Hill.

PROVINCIAL WHOLESALE DEALERS—

BIRMINGHAM—Wood & Co., Chemists, Holloway Head; and C. Cadby, The Parade.

GLASGOW—The Apothecaries Company.

LIVERPOOL—Evans & Co., Ayrton & Saunders, John Thompson.

YORK—Raines & Co.

MANCHESTER—Oldfield, Pattinson & Co.

LEEDS—Goodall, Backhouse & Co.

CARDIFF—Albert Hagon.

It is requested that retailers will supply themselves if possible through their Wholesale Houses; but samples may be had direct from the Proprietor—

S. WILSON, CHEMIST, ST. HELENS, LANCASHIRE

GENUINE DALMATIAN INSECT POWDER.

PRESENT NET PRICES—

In original kegs, 160/- cwt., per lb. 1/9.

READ THE FOLLOWING FROM AMERICA:—

"The Insect Powder which you sent us last year, on invoice of May 5, turned out so satisfactory that we are inclined to try a second lot, and we should be pleased to have you enter us an order for twelve kegs of your guaranteed pure powder from closed flowers."

ALSO FINEST ESSENTIAL OILS, PURE DRUGS, ACIDS, CHEMICALS, ETC.

G. VOGT,

WHOLESALE AND EXPORT DRUGGIST,

12 LAURENCE POUNTNEY LANE, LONDON, E.C.

Inland and Foreign Telegrams: "ALSACE LONDON."

Samples and Price Lists on application.

HAMBRO SPECKLED



TRADE MARK
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All Orders by Post receive immediate attention.

LEECHES!

Warranted Healthy. Wholesale
and for Exportation. Direct
from Marshes.

FITCH & NOTTINGHAM,

LEECH BREEDERS,
4 CANONBURY SQUARE, LONDON, W.

INFALLIBLE! INFALLIBLE!!



ESTABLISHED 1833.
HORSES.—LIEUT. JAMES'S BLISTER.

CAUTION.

The annexed Label is at
the top of every Pot of
the ORIGINAL and only
GENUINE BLISTER.

The Messrs. Barelay & Sons,
95 Farringdon Street, London,
and Messrs. Raines & Co.,
Edinburgh, are now and have
been Agents 56 years.



AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son,
157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans,
Lescher & Evans, Bartholomew Close; Burgoyne, Burdighes & Co.,
16 Coleman Street; Lynch & Co., 171A Aldersgate Street; Southall
Brothers and Barelay, Birmingham; R. Hovenden & Sons, 93 & 95 City
Road, Finsbury; Sanger & Son, 150 Oxford Street; Millard & Sons,
40 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell,
Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Man-
chester; Apothecaries Company, Virginia St., Glasgow; John Thompson,
53 Hanover Street, Liverpool; Boileau & Co., Bride Street, Dublin;
McMaster & Co., 121 & 122 Capel Street, Dublin; Clarke & McMullen,
Victoria Street, Belfast; D. Galbraith, Londonderry; M. C. Delacro,
Pharmacie Anglaise, Bruxelles.

And by all Chemists, in Pots, 1/6, 2/9, 5/, 9/, and 16/.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Felton,
Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. &
Co.; DUNEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA:
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W. H. JAMES, SOLE MANUFACTURER, STAMFORD, FARINGDON, BERKS
Advertised in "Bell's Life" 14 years. Beware of Spurious Imitations.

CANNOT BE EXCELLED.

Over 40 years' Reputation as the most Deadly
and Reliable

"KILLER"

extant, retaining its properties for any length of
time, in any climate.

Testimonial from Mr. JAS. THOMPSON, Farmer, Carlisle,
to Mr. PATTINSON, Chemist, Carlisle.

"SIR,—You can with confidence recommend 'HUNTER'S
VERMIN DESTROYER.' It is the best thing I ever used,
having often cleared stackyards with it of both rats and
mice in a day or two."

Of all the Wholesale Houses. Shippers will oblige by sending for terms.

MANUFACTORY: DEWSBURY, ENGLAND.

THE FLY SEASON.

The attention of the Trade is invited to the "Fly Cemetery," a non-poisonous fly-paper. This novelty has been enthusiastically received wherever introduced. The title and matter printed on the paper is original, and takes immensely with the public, who quickly patronise anything out of the ordinary line. The "Fly Cemetery" (registered and protected) is a large sheet of paper, spread with our "Honey Fly Gum." It has proved itself the most deadly Fly Trap ever invented, and will rid a room of flies in a few hours. Having a sweet and pleasant smell it soon attracts them, and once having alighted they stick fast. Simply open out the Honey Fly Gum Paper, and the "Fly Cemetery" is then ready for its victims. One paper will catch thousands. When full cremate the whole cemetery. They are the perfection of Fly Papers. No more poisoned flies dropping all over the room. No more afternoon naps spoiled by the flies, and—no more bad language.

EYE OPENERS

SELECTED FROM NUMEROUS RECENT TESTIMONIALS.

Mr. Gibb, Chemist, Winchester, writes:—

"Your 'Fly Cemeteries' were most effective, and the demand for them quite phenomenal."

Messrs Duck & Sons, Cardiff, write:—

"Your 'Fly Cemeteries' gave every satisfaction, and sold wonderfully well."

Mr. Bibbings, Chemist, Newton Abbot, writes:—

"The public speak well of them and will have them in preference to the old-fashioned blotting-paper one."

Mr. Harvey, Chemist, Margate, writes:—

"As soon as your 'Fly Cemeteries' came to my notice I adopted them, and can confidently say I never sold any article which requires so little introducing. They recommend themselves, and those who buy call in their neighbours to see the 'wholesale catches.'"

Mr. Merrett, Southsea, writes:—

"Your 'Fly Cemeteries' gave great satisfaction to my customers—in fact no one would have the old-fashioned ones after seeing the 'Cemeteries' fill up so quickly."

Messrs. Freshwater & Sons, Twickenham, write:—

"Can bear testimony to the great value of the 'Fly Cemeteries.' They have a ready sale. We used them continually in our shop, and found they kept the flies and wasps well under, and quite cleared the place."

Messrs. Munro & Lea, Landport, write:—

"'Fly Cemeteries' are an undoubted improvement on any other make, being effectual, cleanly, and economical."

Messrs. Judson & Son, Chemists, Ripon, write:—

"Your 'Fly Cemeteries' sold with very satisfactory results; they secured a large demand, were preferred to other fly destroyers, and with confidence can recommend them."

Messrs. Wand & Co., Leicester, write:—

"The 'Fly Cemeteries' we sold gave every satisfaction."

Messrs. Chave & Jackson, Hereford, write:—

"The Sticky 'Fly Cemeteries' you sent us last season are the best we have seen. They catch more flies in a day than the old-fashioned papers do in a week; and, what is more, you have the satisfaction of knowing that you have caught so many thousands, for the papers are literally black with flies in a few hours after exposing them."

Messrs. Pinch & Co, Chemists, Bath, write:—

"Can confidently recommend 'Fly Cemeteries' to any of the ordinary fly papers, either French or English. When generally known they will supersede all other kinds."

Mr. Roberts, Chemist, Croydon, writes:—

"I sold a great number of 'Fly Cemeteries.' Purchasers were thoroughly satisfied; they are decidedly more effective than the old poisonous kind. I guess that during the coming season yours will hold the field."

Messrs. Dear & Sons, Ventnor, write:—

"Your 'Cemetery' Fly Papers have proved highly satisfactory, commanding a ready sale. What you say respecting them we are able to endorse."

Mr. Mumford, Chemist, Splotland, writes:—

"I found your 'Fly Cemeteries' very saleable and effectual—in fact, they gave the most complete satisfaction—except to the flies."

Mr. Young, Supply Stores, Teignmouth, writes:—

"Your 'Fly Cemeteries' were a great success, and were very highly approved of. I had one literally covered with flies a short time after it had been hung up; this was sufficient proof to induce my customers to try them, and then it was a case of once tried always used."

Mr. Alfred Coleman, Chemist, 65 St. Mary Street, Cardiff, writes:—

"The sale of your 'Fly Cemeteries' last year surpassed my most sanguine anticipations. No sooner had I displayed one in the window well coated with flies than the demand sprang up in the most remarkable manner, and it became the talk of the town, customers being drawn from every part, thus proving a useful summer advertisement."

Messrs. Yelland & Co., the Supply Stores, Dawlish, write:—

"I found the 'Fly Cemeteries' sell well, and think they are a great improvement on the ordinary fly papers, much cleaner and no offensive smell or trouble."

Messrs. J. H. Blunt & Son, the Drug Stores, Northampton, write:—

"We have very great pleasure in testifying as to the excellence of your 'Fly Cemetery,' for which there was a large demand last season, both here and at our Coventry branch, immediately on its introduction. We can but compliment you on producing an article commanding so ready a sale, and with best wishes for your further success."

THE "FLY CEMETERY" WAS AWARDED A SILVER MEDAL FOR NOVELTY & SUPERIORITY.

Terms—7s. per gross, Carriage Paid for Cash with Order. Packed in Counter Cases.

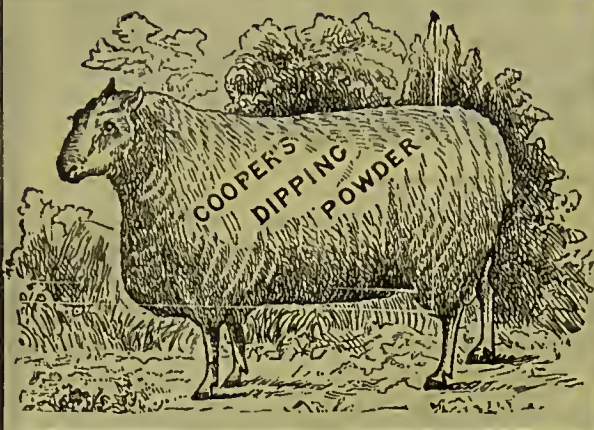
Satisfaction is guaranteed. WILL KEEP GOOD ANY LENGTH OF TIME. Send order at once.

SAMPLE ON APPLICATION FROM

TUNBRIDGE & WRIGHT, 83 & 84 BROAD STREET, READING.

Wholesale from BARCLAY'S, BENTLEY'S, MAW'S, SHARP'S, and all Patent Houses.

THE ONLY ORIGINAL POWDER DIP



USED ON
SIXTY MILLION
SHEEP
ANNUALLY.

CHEAPEST,
SAFEST,
HANDIEST, BEST,
FOR

**TICKS, LICE,
FLY, SCAB.**

LAST YEAR ALONE
THE SALE
INCREASED
250 TONS.

IN GENERAL USE SINCE 1843.

BEWARE OF IMITATIONS.

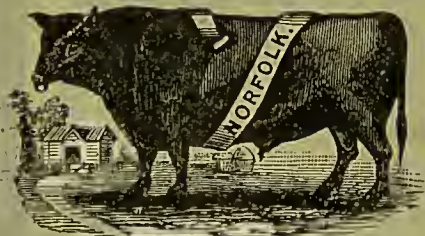
Attractive Handbills, Show Cards, Posters, &c., with Name and Address,
supplied gratis on application.

SOLE PROPRIETORS AND MANUFACTURERS,

WILLM. COOPER & NEPHEWS, M.R.C.V.S., BERKHAMSTED.

LONDON OFFICES—50 and 50a Palmerston Buildings, Bishopsgate Street, E.C.

TO RETAILERS OF HORSE AND CATTLE MEDICINES.



THE "NORFOLK" CONDITION DRENCHES, for Cows, Fattening Bullocks, Sheep, and Pigs

Retail 1/2 doz. cases, 4/6; 1 doz., 9/-; 3 doz., 22/6

Wholesale 3/3; " 6/6; " 17/6

THE "NORFOLK" CORDIALINE or PAIN KILLER, for Horses, Neat Stock, Sheep and Lambs

Retail 1/2 doz. cases, 6/-; 1 doz., 12/-; 3 doz., 31/6

Wholesale 4/-; " 8/-; " 24/-

With usual cash discounts at all London Medicine Houses.

F. SUTTON & CO., NORWICH, are now advertising these celebrated Preparations in the leading agricultural papers, and they are in constant use on the Royal Farms and by noted Breeders all over the kingdom, and especially by more than 3,000 Cowkeepers in Great Britain and Ireland. When once used they are sure to be adopted, as there are no similar preparations equal to them in the market.

PERSONAL MANAGEMENT in LONDON. PERSONAL REPRESENTATION in the COUNTRY.

GEORGE WALKER, late of the Firm of Wyleys & Co.; CHARLES TROKE, of the late firm of Gabriel & Troke, trading as

WALKER, TROKE & CO.

WHOLESALE AND EXPORT DRUGGISTS

82 CITY ROAD, LONDON, E.C.

SOLE MAKERS OF

INTRODUCED TO THE
TRADE 1880.



IMITATED BY MANY.
EQUALLED BY NONE.

GABRIEL & TROKE'S GELATINE CAPSULED HORSE BALLS.

PERMANENT IN SHAPE. EASY IN ADMINISTRATION. EFFICACIOUS IN ACTION. SAMPLE & RECIPES ON APPLICATION.

Drugs, Chemicals, and Pharmaceutical Preparations on best possible terms. Special Quotations to Export Buyers.

HAMILTON & CO'S

CONCENTRATED FLUID SHEEP DIP

USED EXTENSIVELY THROUGHOUT THE WORLD.

ADVANTAGES.—It is NON-POISONOUS, except to Insect life; safe and easy to use; cleanses the wool, and promotes its growth; only requires cold water to mix; is the cheapest and best Dip in the market.

ONE GALLON WILL DIP ONE HUNDRED SHEEP.

Wholesale Prices—In Strong Iron Drums, per 4/ gall., drums free; or in 40-gallon Casks, per 3/6 gall., casks free.

SPECIAL TERMS—Cash with Order, less 10 per cent. discount; or Net Cash in a Month.

HAMILTON & CO., HIGH STREET, WANDSWORTH, LONDON.

By Appointment to H.R.H. the late Prince Consort.

BIGG'S SHEEP AND LAMB DIPPING COMPOSITION,

For Destruction of Ticks, Lice, &c., and Prevention of Fly.

HAS NOW BEEN USED WITH GREATEST SUCCESS FOR NEARLY HALF A CENTURY.

PAMPHLETS ON APPLICATION.

LEICESTER HOUSE, GREAT DOVER STREET, BOROUGH, LONDON.

Agents—EVANS, SONS & CO., New York, and Montreal, Canada.

PINE'S DEVONSHIRE OILS

PRICE

1 dozen,	13/6	Per doz. net in
3 "	12/6	Wine Bottles.
6 "	11/6	CARRIAGE PAID.
12 "	10/6	Single Sample
		Bottle, 1/9.

FOR HORSES, COWS, SHEEP, AND LAMBS.

THESE CATTLE OILS are prepared from the Original and Valuable Recipe of WILLIAM YOUATT PINE, and are unsurpassed, their great sale being a sufficient guarantee of their EXCELLENCE.

PREPARED AND SOLD WHOLESALE BY

WALTER GREGORY, 31 Fore Street, WELLINGTON, SOMERSET.

WILEY'S CHEMICAL ESSENCE

FOR

LAMENESS IN HORSES.

Agents Wanted in every Town. Handbills, with Name and Address, supplied gratis.

50 YEARS' UNBROKEN SUCCESS.

SOLE MAKER & PROPRIETOR, J. ROOKLEDGE, CHEMIST, EASINGWOLD, YORKS.

TO BE HAD OF USUAL WHOLESALE HOUSES.

A CHEMIST'S NEW AND LOGICAL DISCOVERY.

PETERMAN'S COCKROACH & BEETLE FOOD

Never Fails to KILL all of these vile Pests.

REGISTERED

It attracts them. They eat it, and are dried up to a shell.

NOT A POISON TO CHILDREN OR PET ANIMALS.

SEE FOLLOWING TESTIMONIALS.

WILLIAM WHITELEY, Universal Provider, London.

ION & CO., Baker's, 3 Lower Belgrave Street, S.W.

CHARLES BEST, Horseshoe Hotel Tottenham Court Rd, W.C.

FIFTH AVENUE HOTEL & UNION LEAGUE CLUB, N.Y., U.S.A.

FOR SALE BY WHOLESALE DRUGGISTS.

Put up in 1/2, 1, and 1 lb. Tins. Prices—1s., 2s., and 4s. per Tin.

J. F. SHOREY, Manufacturing Chemist,

57 FARRINGDON ROAD, LONDON, E.C.



TRADE MARK.

ESTABLISHMENT OF BOULEVARD VOLTAIRE, 162 & 164, PARIS.

GOLD & SILVER
MEDALSAT ALL
EXHIBITIONS.

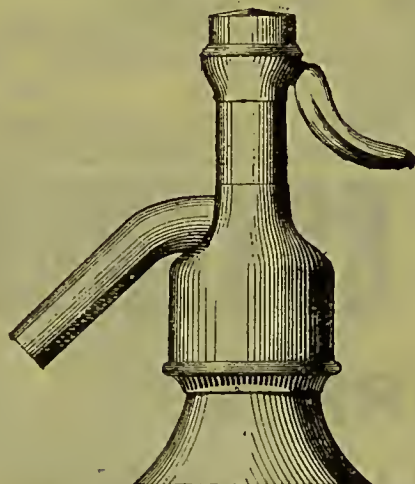
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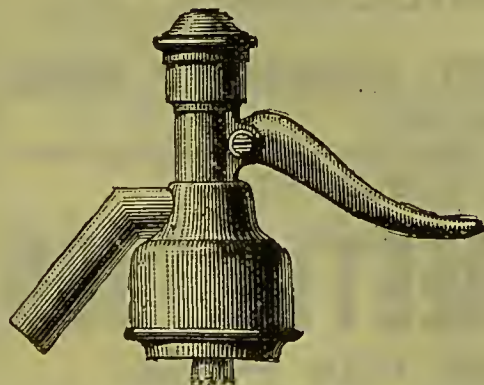
SYPHONS

OF ALL MODELS

Made of Bright or Ordinary
Metal,
and of White or Coloured Glass,
1st Quality.



SMALL LEVER.—No. 5.



LARGE LEVER.—No. 10.



SMALL LEVER.—No. 1.

APPARATUS

AND

POWDERS

To Make Seltzer and Vichy
Waters, &c., &c.



SELTZATEUR.

New Patent Syphons with TUBES entirely made of CRYSTAL for Lemonade and Potash or Soda Water.

We beg to call the attention of our numerous customers to the quality of the material employed in the manufacture of our Syphons. In the bright quality not a particle of lead is employed. The crystal is of the very best quality; each Syphon is guaranteed to be tested before leaving our works.

SODA WATER MACHINES.

FILLING MACHINES.

Our General Catalogue and Price List will be sent free on application. Large Discount for Quantities.

EUGENE GERAUT & CO.**139 & 141 FARRINGDON ROAD, LONDON, E.C.****ALL SELTZOGENES AND SYPHONS,**

Previous to being delivered, are tested at a pressure of 240 lbs. per square inch, being double that which they are used at; by this we can guarantee every machine on its leaving our firm.

It must be distinctly understood that all Seltzogenes and Syphons bearing our name are of pure Tin, and made on the PREMISES OF THE ABOVE FIRM, consequently must not be confounded with other cheaper, and inferior foreign goods that may at any time be forced on the market. The ever-increasing demand for our goods convinces us that we are, as hitherto, the leading and largest firm in this class of trade.

Complete with Funnels, Stopper, and directions for using. For order of £5 and upwards Customers can have their Names stamped on Metals free of charge.

SELTZOGENES REPAIRED, REWIRED, & TESTED BY EXPERIENCED WORKMEN.
POWDERS FOR SELTZOGENES AND GAZOGENES.

Illustrated Price List on application.



CELEBRATED D. FEVRE'S SELTZOGENES.

COMPLETE WITH FITTINGS.**GUARANTEED TESTED**

by 175 lbs. of pressure per square inch.

BEST AND CHEAPEST.**CAUTION.**

To ensure the purchase of the genuine celebrated

SELTZOGENES OF D. FEVRE,

which do not cost more than the imitations, observe on the shoulder of the apparatus the words—

"VERITABLE SELTZOGENE D. FEVRE,"

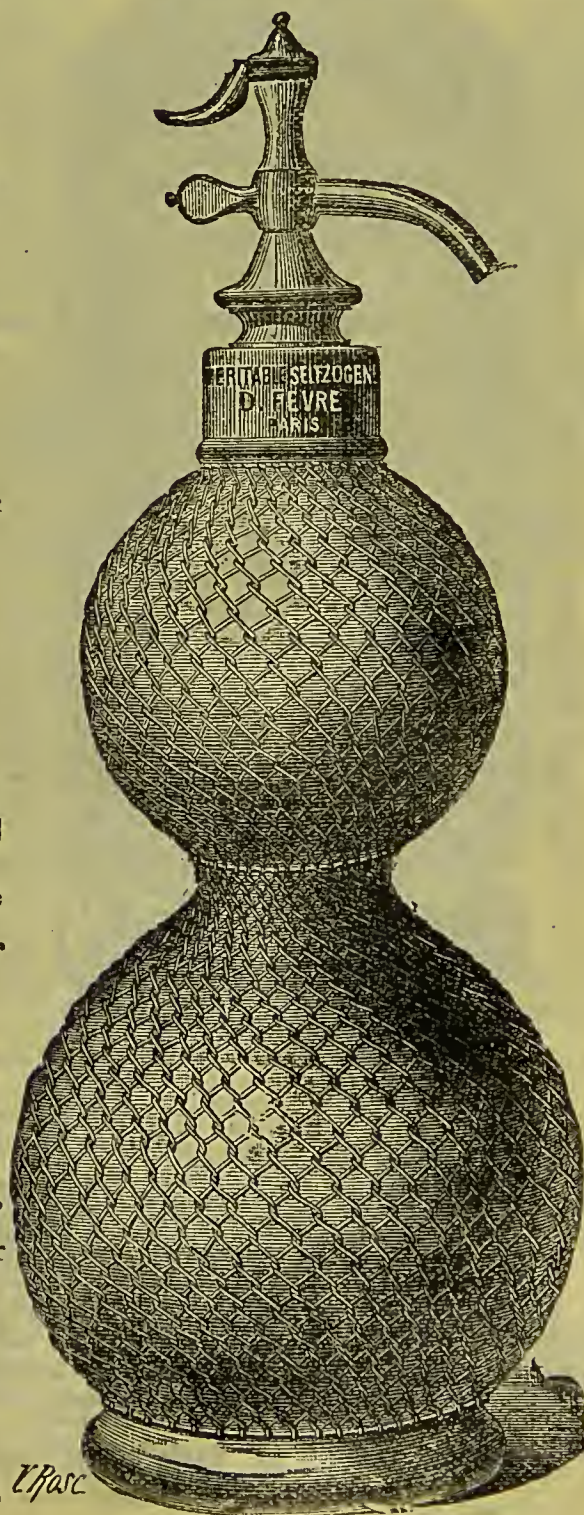
AND THE TRADE MARK SIGNATURE—

THESSIER-FEVRE,

Sole Manufacturer,

OFFICE—

WORKS—

398 Rue St. Honore, **PARIS.** 9 Rue Castex (Near the Busville) *L'Espresso*

THE "LONDON-MADE" SYPHON BOTTLE

(TITLE REGISTERED).

Obtained the HIGHEST AWARD at the International Health Exhibition, London, 1884.



The high reputation this bottle has achieved is due to the fact of its being in every particular the most perfect yet introduced; and when compared with others in the market it stands pre-eminent. It is most simple in its working parts, therefore the least liable to get out of order; it is the most easily opened, the lightest pressure on the handle being sufficient; it produces a more highly-charged gaseous water than is usually obtained from syphons; it compares most favourably in appearance with any, and the metal top being entirely free from lead, the prejudice against syphon drinks is at once removed, as the liquid passes over pure tin only.

All our Syphons are now fitted at the base with a groove, so that drips from the spout that run down the sides are prevented from soiling the table. See drawing.

NOTE.—Syphons made with our patent foot for collecting excess of liquid dripping from the spout after use are supplied at no extra charge, and will be found of great utility in preventing stains, &c., upon table linen. This is a desideratum long been wanting, particularly for private-house use. Send for sample; forwarded upon receipt of 2s.

Any name, crest, or trade-mark put on the glass by an improved acid process, at from 18s. to 24s. per gross. There is a three-fold advantage in this, as it forms a continual advertisement, is a great ornament, and a preventive of fraud. The plate for engraving costs extra from 5s. upwards, according to the artistic device required.

PRICES (WHITE, BLUE, GREEN, OR AMBER):—

	By the gross, per doz.	Less than 1 gross, per doz.
Quart size	41 2 0	41 4 0
Pint size	1 1 0	1 8 0
Half-pint, Pear shape	1 0 0	1 2 0
Octagonal vases, any colour (including Azure Blue)	1 4 0	1 6 0

Tops, nickel-plated, from 5s. 6d. per doz. extra. Tops, silver-plated and burnished, from 9s. per doz. extra. A charge is made for packing, except when ordered in our patent bin cases (holding one dozen each, price 7s. 6d. each).

Please Note.—B. & F. are the only firm manufacturing Syphons in England that do not supply them filled, and so compete with their customers' trade.

BARNETT & FOSTER,

MINERAL WATER ENGINEERS,

Manufacturing Chemists, and General Providers for the Aërated Water Wine, Beer, and Cyder Trades,

"Niagara Works," 26th Eagle Wharf Road, London, N.

Send for Price List of Soda-water Machinery and Accessories.

T. & F. J. TAYLOR'S AËRATED WATERS, Newport Pagnel.

ESTABLISHED 1835.

SODA, POTASH, SELTZER, AËRATED (without Alkali), and LITHIA WATERS, LEMONADE AND GINGER ALE.

Each Bottle is protected by a Label bearing the Signature of the Firm.

Purity and Excellence of the Water certified by Analysis by Professor ATTFIELD, Ph.D., F.C.S.

ANDREWS' FILTERS

No. 1, 12/6.

FOR THICK LIQUIDS.

No. 2, 18/6.

Used Extensively by Manufacturing Chemists and Druggists.

Sent Carriage Paid on receipt of Postal Order or Cheque for 12/6 or 18/6.

FILTERING CLOTHS OF EVERY DESCRIPTION.

ANDREWS' FILTER CLOTH CO.,
330 High Holborn,
LONDON, W.C.



CHEMISTS' TEA AGENCY.

WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S

INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.— AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and 2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank of England.

RANDALL'S BLACK CURRANT LOZENGES

Plain Black Currant, old square 2/6	Black Currant Voice (warm astringent) 3/
Plain Black Currant, rough oval 2/6	Black Currant Cough Lozenges* 3/6
Black Currant and Ipecacuanha 2/6	*Ipecac. & Morph., strength as "B.P."
Black Currant and Tannin . . 3/	

In Bottles, 1-lb., 2-lb., 4-lb., and 7-lb. For Exportation, in Soldered Tins, of any size. From EDWARDS, London, or SANGER & SONS; through any Wholesale House; and from the Manufacturers,

RANDALL & SON, SOUTHAMPTON,

Who will forward Samples by post on application.

Also Brown Cough Lozenges, 2/; 7 lbs. stamped with name free, and Musk Lozenges (Special), 2/6.

N.B.—Medical Lozenges of every kind, including those of the Pharmacopœia of the Hospital for Diseases of the Throat, London, made with Black or Red Currant.

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SODA WATER MACHINERY

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SYPHONS & SELTZOGENES

GREAT REDUCTION IN PRICE.



We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.

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MELBOURNE EXHIBITION, 1889, UNPRECEDENTED SUCCESS.

We have obtained at the above Exhibition

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A feat never accomplished before by any other house supplying requirements for the Aërated Water Trade.

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Aerated Water Engineers and Glass Bottle Manufacturers,

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TO AERATED WATER MANUFACTURERS

XXXS

SOLUBLE ESSENCES

REGISTERED

ARE GUARANTEED TO BE THE FINEST IN THE MARKET

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HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER,
A Pure Essence of the Finest Ginger.
Trade Price 5/ per lb.; 12 lbs. and upwards, 4/6.

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For First Quality Ginger Ale.
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For Second Quality Ginger Ale.
Imparts Pungency, Colouring, great Brilliancy, and an unusually Fine Ginger Flavour and Aroma.
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This Essence makes a beverage that is unsurpassed by the so-called finest Belfast Ginger Ale.
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Have obtained the Highest Testimonials from all the Medical Journals, and from the Principal Trade Journals in this and other countries.



For ORANGE, VANILLA, and all other Essences,
SEND FOR PRICE LIST.

HAY'S HOP ALE ESSENCE,
For the manufacture of the Finest Aerated Hop Ale. This Essence is made from the choicest Hops grown, and is unrivalled for its peculiarly fine Hop Flavour and Aroma. Hop Ale made from this Essence has the full flavour of the finest Hops, and is a really appetising Bitter Beer.
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No. 1. Highly Concentrated.
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Imparts to Lemonade all the Fine Aroma and Flavour of the choicest Lemons.
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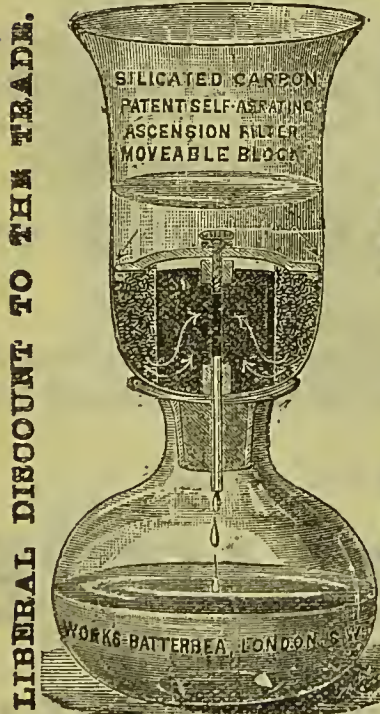
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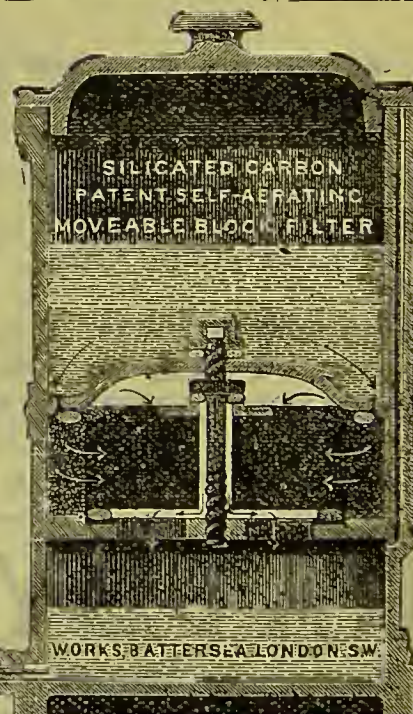
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The Silicated Carbon Block can be Instantly Removed, leaving the whole of the Filter Open for Inspection and Cleansing.



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LIME-FRUIT JUICE & CORDIALS

Caution the Trade against all Imitations.

EVANS, SONS & CO., Liverpool, are the Sole Consignees of this Juice, and the word “MONTSERRAT” being registered as a Trade Mark, proceedings will be instituted against any persons infringing their Trade Marks. All bottles bear their Name and also Trade Mark as follows on Capsule of each bottle:—

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TRADE



MARKS

TRADE MARK

SOLE CONSIGNEES:

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EVANS, LESCHER & WEBB
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CANADA:

EVANS AND SONS (LIMITED),
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A GOOD LINE FOR CHEMISTS.

The Proprietor will forward carriage paid throughout Great Britain, on receipt of Postal Order, 4s, 1 dozen 6d. bottles of this Popular preparation for making

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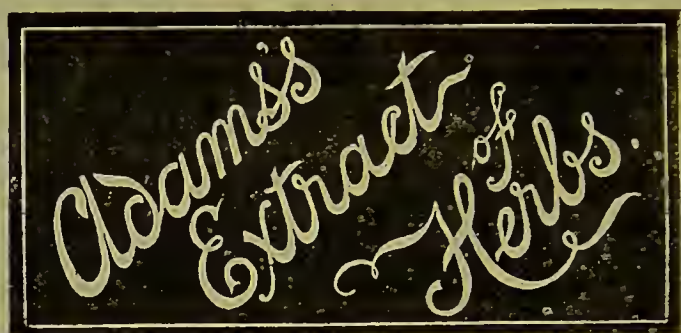
together with One Thousand Pictorial Handbills printed in colours on fine tinted paper, being a series of 16 copper-plate



views of scenes from the famous "Dukeries" of North Notts. These Handbills are a high-class example of the printer's art, and are retained by the public for the beauty of the pictures, and thus cause a demand for the preparation wherever introduced. This exceptionally favourable offer can only hold good until 31 May, 1889.

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PRIZE MEDAL



HEALTH
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ESTABLISHED 76 YEARS.

POTTER & CLARKE



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WHOLESALE AND EXPORT BOTANIC DRUGGISTS,
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FLUID EXTRACTS

Our Brand is now well known throughout the Trade for high quality and therapeutic value. We stock all the U.S.P. and P.B. Fluid Extracts, and also the largest variety of the non-official, of any house in England.

SPECIAL PREPARATIONS.

ALTERATIVE OR ANTISYPHILITIC COMPOUND (SUCCUS ALTERANS).—Formula as given by Dr. J. Marion Sims in the *British Medical Journal*, composed of Smilax Sarsaparilla, Stillingia Sylvatica, Lappa Minor, Phytolacca Decandra, &c. **4s. per lb.**

LIQ. KAVA CO.—A Fluid Extract of Kava Kava, Hydrastis, Uva Ursi, &c.; for Gonorrhœa, Gleet, Leucorrhœa, and affections of the Urinary organs. Recommended as a substitute for Liq. Copaib. Co., without its nauseousness. **4s. 6d. per lb.**

We shall be pleased to supply samples of these preparations, post free, on application.

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NON-INTOXICATING BEVERAGES.

MASON'S ORIGINAL

EXTRACT OF HERBS

REGISTERED.

Composed of YARROW, DANDELION, COMFREY, and HOREHOUND.

A SIXPENNY BOTTLE MAKES EIGHT GALLONS OF HERB & BOTANIC BEER

This invaluable preparation is carefully compounded from the above-mentioned popular Herbs gathered when in full bloom, and contains all their well-known tonic, stomachic, and blood-enriching properties unimpaired. Notwithstanding many imitations got up to resemble the original, it stands unrivalled for the production of a most delicious, invigorating, and non-intoxicating beverage, full of body and flavour, with a creamy head like bottled ale, which is not only cooling and refreshing in its nature, but also a pure and healthy stimulant, is unquestionably the most wholesome and perfect substitute for intoxicating drinks ever discovered, for either summer or winter.

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EXTRACT GINGER ALE

For Sparkling Ginger Ale.

EXTRACT OF HOPS

For Hop Ale.

EXTRACT OF GINGER

For Ginger Beer.

EXTRACT OF DANDELION

For Dandelion Porter.

EXTRACT OF HOREHOUND

For Horehound Beer.

EXTRACT of SARSAPARILLA

For Sarsaparilla Porter.

EXTRACT OF LEMON

For Lemonade.

EXTRACT FOR CIDER

For Devonshire Cider.

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For Winter Ale.

MASON'S FOAMINE

For producing a Creamy Head on all Beverages.

THIS IS SOLD IN BULK.

SOLD IN BOTTLES, at 6d., 1s., 2s., and 5s. each, with Directions.

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THESE WINE ESSENCES WILL PRODUCE IN A FEW MINUTES UNFERMENTED

TEMPERANCE WINES & CORDIALS.

Ginger, Orange, Lemon, Raspberry, Black Currant, Pineapple, &c.

IN BOTTLES, 6d., 1s., and 2s. EACH.

Prices, Circulars, Show Cards, &c., on application. Our Extracts are not affected by Climate or Weather.

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ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Company's Extract of Beef, Extract of Malt, and sound Port Wine.

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From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skilful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

Dear Sir,—I am in receipt of the samples of Meat Wine you sent to me. I was so pleased with the results obtained from it that I have obtained a further supply, and have given it a rather extensive trial. I have found it invaluable as a medicine in the treatment of Enteric and Scarlet Fever sufferers from those diseases rapidly improving in strength and weight under its influence. I think the combination a very happy one.

To B. ROBINSON, Esq.

I am, dear Sir, faithfully yours,

JOHN MULLEN, Resident Medical Officer.

Wilton Fever Hospital, Salford, September 2nd, 1888.

PREPARED ONLY BY
BENJAMIN ROBINSON, THE LABORATORY, PENDLETON, MANCHESTER.

N.B.—A Sample Bottle sent FREE on receipt of Professional or Business Card.

MILLAR'S BRITISH WINES.

ORANGE (suitable for Quinine), GINGER, RAISIN, COWSLIP, CHERRY, &c.

A. MILLAR & CO., Thomas Street, DUBLIN.

Sole Agents for London and District—H. J. ROYDANT & CO., 75 Acre Lane, Brixton, S.W.

HASSALL'S LIEBIG'S EXTRACT OF MEAT AND MALT WINE,

Made of Choice Port Wine, Liebig's Extract of Meat and Extract of Malt.

ARTHUR HILL HASSALL, M.D., London, and E. GODWIN CLAYTON, F.I.C., F.C.S., say:—"The results of our Analysis have been of a very satisfactory character, and we are enabled to pronounce this a valuable and very good preparation, possessing an agreeable vinous flavour. The amount of combined phosphoric acid present is large, and the valuable characteristic constituents of Extract of Meat, in combination with Port Wine of good quality, and Extract of Malt."

WM. COURTINAY, M.D., &c., Medical Officer, Nenagh Disp. (late Resident Surgeon, St. Michael's Hospital, Kingstown, Nenagh, County Tipperary) says:—"To those requiring a nutritious and palatable food, its strengthening and tonic qualities are really good."

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Cest of Retail Wine Licence will be allowed on a 6-dozen order. Supplied in bulk at greatly reduced prices. Special arrangements made to supply the Wine in Bottle, with attractive Labels, Circulars, and Handsome Framed Show Cards, with Buyer's own name upon same, free of charge. List of Testimonials, copy of Analysts' Reports, and Trade Prices and Samples free on application.

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To H.R.H. The Prince of Wales, The Empress of Germany, &c.

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PEPTONES
OF
BEEF,
MUTTON,
VEAL,
AND
CHICKEN.



TYRER'S SAUCES

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"BOROUGH" KETCHUP.

£1



12½ Gallon Cask,
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DO NOT THROW MONEY AWAY
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Tyrer's
"BOROUGH"
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SENT FREE
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SILVER MEDAL
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12½ Gallon Cask,
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1d. Sample Bottles, dozen parcels	per gross	5/	extra quality	6/
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" " " ½ gross boxes	"	6/6	"	8/6
¼-Bottles (flat or round), reputed ½-pint	"	16/	"	24/
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1-pint " " "	"	50/	"	60/
12½-gallon Casks (casks free)	each	20/	"	32/

ROYAL CAFÉ SAUCE.

In 8-oz. Square Stoppered Bottles, 48/ per gross.

A rich fruity Sauce of fine flavour, and worth especial attention, as
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SAMPLES OF ANY KIND SENT FREE OF ALL COST BY

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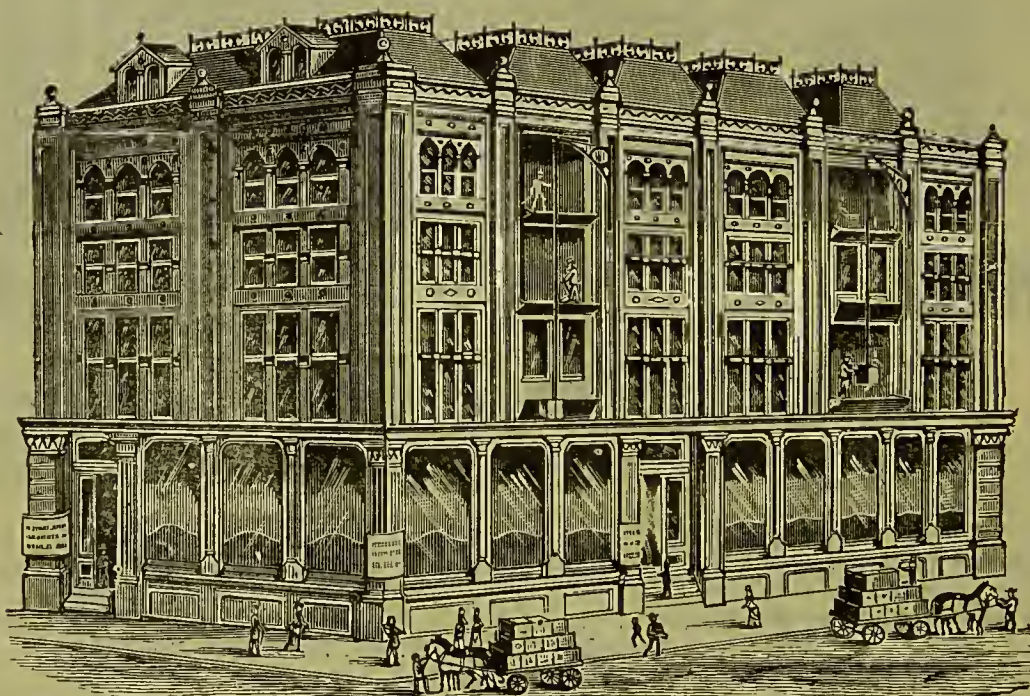
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THE PREMIER TEA OF INDIA AND
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In Lead Packets, $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., and 1 lb.

Terms of Agency, and Samples of the Tea, on application.

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The Directors are entertaining applications for the Agency for the sale of the Company's Teas. A liberal Commission will be allowed. The appointments will be found to be most valuable, entailing little, if any, trouble to the Agent, in addition to which, from the very extensive nature of the Company's advertising all over the country, the appointment will be the means of bringing large numbers of customers to him, who, when buying the Teas, will at the same time patronise his general business.

The UNITED KINGDOM TEA COMPANY'S TEAS are of WORLD-WIDE REPUTATION, and are supplied FIRST-HAND direct from the Mincing Lane Market.

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IMPERIAL WAREHOUSE,
LEMAN STREET,
LONDON DOCKS.

THE DIAMOND MARK.

To secure the best Hungarian Aperient Water

DEMAND THE DIAMOND MARK,

And insist upon receiving the HUNGARIAN APERIENT WATER sold by the APOLLINARIS COMPANY (LIMITED), LONDON.

OF ALL DRUGGISTS AND MINERAL WATER DEALERS.

THE KAISER'S COCOA.

MEAT. PEPTONE. COCOA.

This Preparation of Cocoa and Peptonised Meat Extract forms one of the most powerful concentrated foods known; it is indispensable to invalids, a boon to the healthy, and to those of a weak digestion. From its richness in nitrogenous principles (21 per cent.), it contains all the elements of tissue muscle, and blood formation, in a form ready to be assimilated at once, being predigested. In Powder for Breakfast, &c., or in Tablets.

As taken by the late *EMPEROR FREDERICK* on the recommendation of *Dr. Leyden*.
PERFECT FLAVOUR. NO OBJECTIONABLE TASTE. EASILY DIGESTED.

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The "MEDICAL PRESS AND CIRCULAR":—

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The "BRITISH MEDICAL JOURNAL" says:—

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YORK, ENGLAND.



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PREPARED BY THE SWISS MILK CO., ST. GALL, SWITZERLAND.

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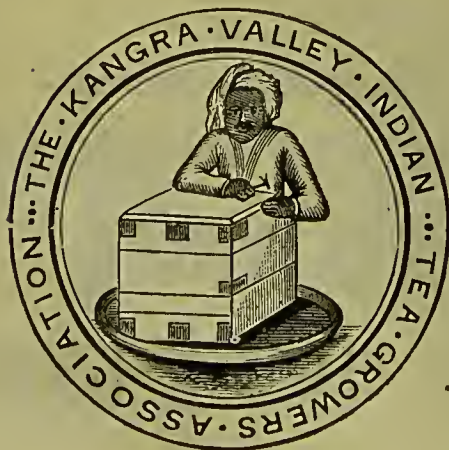
The cheapest, purest, and most nutritious of all similar productions.

The Lancet says:—A very interesting and valuable preparation.

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KANGRA VALLEY INDIAN TEA GROWERS' ASSOCIATION.

French & Langdale, 14 St. Dunstan's Hill, London, E.C.

Guaranteed to be Absolutely Pure, as supplied to Europeans in India.

Packed in 1-lb., ½-lb., and ¼-lb. Metallic Air-tight Packets.

No. 1, Orange Pekoe, at 4/ per lb. No. 2, Pekoe, at 3/ per lb. No. 3, Pekoe Souchong, at 2/6 per lb. No. 4, Souchong, at 2/ per lb.

Export Prices in Bond, 6d. per lb. less than above, in Chests of 50 lbs. and upwards, shipped free of charge. Wholesale Discount on Nos. 1, 2, and 3, 17½ per cent.; on No. 4, 12½ per cent. 50 lbs. Carriage Paid. No Travellers employed. Tasting Samples on application.

These Teas are recommended to Chemists not only on account of their Purity, but because they are Less Astringent than other Indian Teas.

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YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each

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The Best in the World. 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

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Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each

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Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

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Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

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Makes the Best Ginger-Beer. Packets, 3d. and 6d.

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For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

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For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In $\frac{1}{2}$ - and 1-pint boxes, 3d. and 6d. each.

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AND

DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

TO THE CHEMISTS & DRUGGISTS OF GREAT BRITAIN.

TELEGRAPHIC ADDRESS:

COLEMAN,

GEORGE'S, NORWICH.

St. George's, Middle St.

NORWICH,

December, 1887.

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE**. Your orders will oblige either direct or through the Wholesale Houses.

Yours obediently,

COLEMAN & CO., LIMITED.

*N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.
Trade prices on application.*

P.S.—Where the Magistrate's Certificate is not held we are willing to pay the entire cost of a Retail Certificate (the holder of which can sell any kind of Wines) if an assorted order of 6 dozen is sent us of any of our preparations. List on application. Our Liebig's Extract of Meat and Malt Wine **WITHOUT QUININE** commands a very large sale, and is recommended by over one thousand medical men who have sent us testimonials in its favour.

SOLE MANUFACTURERS—

COLEMAN & CO., LIMITED,

ST. GEORGE'S, NORWICH,

AND 3 NEW LONDON STREET, LONDON, E.C.

HIGHEST AWARD AT THE INTERNATIONAL EXHIBITION, LONDON, 1885.
TRADE MARK Registered May 21st, 1867.

"THE PIONEER TEMPERANCE BEVERAGES"—Ch. Eng. Temp. Chron.



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FRUIT SYRUPS & CORDIALS

"First-class beverages."—*The Grocer*.
"Have an established reputation"—*Nonconformist*.
"That Beckett's Fruit Syrups are equal to what their proprietor claims for them is proved by the fact that they are largely used in Coffee Houses throughout the country."—*Coffee Public House News*

Analytical Reports from GRANTVILLE H. SHARP, Esq., F.C.S.; G. BOSTOCK, Esq., F.C.S.
Price Lists, Testimonials, and other information sent post free on application to the Manufacturer—**W. BECKETT, Heywood, Manchester.**

MILD DRINKS.
Cherry. Raspberry.
Strawberry. Lime Fruit.
Black Currant. Lemon.
Orange. Jargonelle Pear.
Pineapple.
Raspberry Vinegar.
Orange and Quinine.

HOT DRINKS.
Winterine. Honey Liqueurs.
Aromatic Black Currant.
Gingerette. Ginger Lemon.
Peppermint. Cove.
Elderberry. Syrup of Hops.
Lime Fruit Cordial.
Raspberry Cordial.

"Delicious beverages."—*Scottish Good Templar*.
"Beckett's Fruit Syrups are not to be excelled."—*Anti-Adulteration*
"All Mr. Beckett's preparations are most tastefully bottled and labelled, and their bright appearance makes them ornamental to the shelves of the Confectioner and Temperance Hotel-keeper."—*Good Templar Watchword*.

THE SUMMER HAS COME. "BE READY."

EVERY BUSY CHEMIST SHOULD STOCK
DE CARLE'S RIPE FRUIT DRINKS OR SOLID FRUIT JUICES.

(Registered No. 72610.)

NOTE WELL.—These are not ready-made Fruit Syrups, but Concentrated Fruit Juices made from Sound, Ripe Selected Fruit, by a process of our own. Specially adapted for the immediate production of Fruit Syrups, Jellies, &c.; also for Flavouring Cakes, Puddings, &c.

RASPBERRY, LEMON, ORANGE, PINE APPLE, LIME FRUIT, CHERRY, &c.

Retail at 4d. each. Price 3s. 3d. dozen net.

Nicely got up, and packed in 3-dozen and 6-dozen Boxes, forming a saleable ornament to any counter. Hand-bills, Show-cards, &c., with each order. Special arrangements for Sole Agencies. These goods are thoroughly appreciated by the public of all classes.

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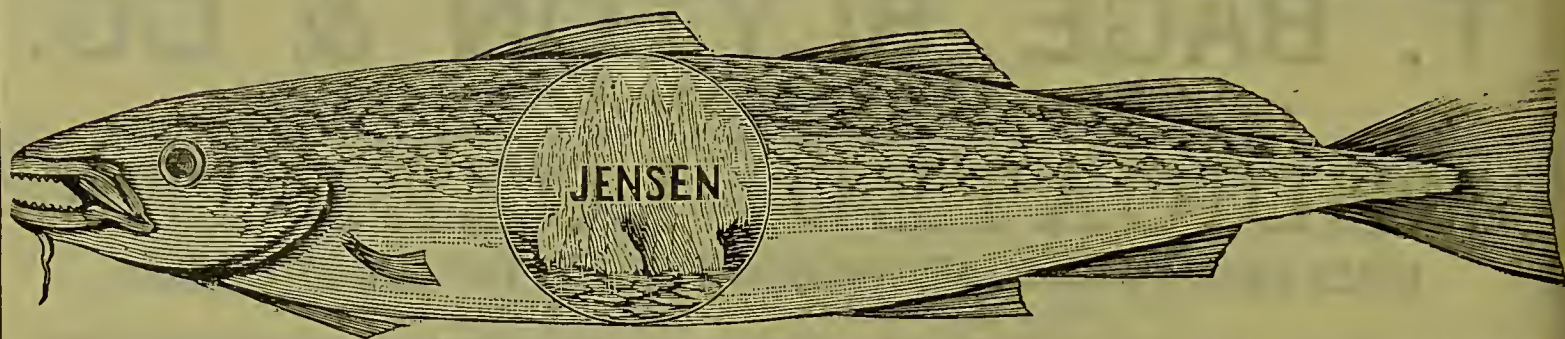
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[See GINGER ALE.]

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From the "CHEMIST AND DRUGGIST," March 9, 1889:—

MESSRS. F. NEWBERRY & SONS' annual catalogue for 1889 is now being issued to the trade. This is the ninth annual issue, and it consists of nearly 600 pages, 731 new entries having been made, 364 removed, and 475 quotations modified. The druggists' sundries section has also been amplified. Some weeks ago we referred to the literary contents, which are of peculiar value, and we may now say of the whole catalogue that it is the most complete one published in this country or elsewhere.

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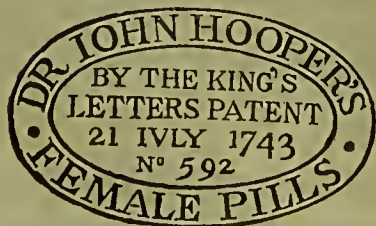
May, 1889.

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LONDON.]

MAY 18.

[1889.



Barley Malt v. Mixed Grains.

The world of scientific maltsters to a man is dead against the mixture of inferior grains (humorously styled the "wild (cat) oats") as compared with the Kepler Barley-Malt Extract. The carbo-hydrates, the main essential in making extract of malt, are forgotten in the craze to boom vegetable albumen.

No sensible authorities claim that other grains can compare with barley for malting, and the manufacturers who advise differently are in a like predicament with the fox who lost his tail in a trap, and enjoined upon his companions the advisability of having their appendages cut off.

A while ago the quantity of albuminoids in wheat and oats as given by Muspratt was compared with that in barley as given (not by Muspratt, but) by Blyth. This manner of picking statistics was pointed out by us, and the table corrected as follows (our *Lancet* page, Dec. 8, 1888):—

NITROGENOUS MATTERS IN BARLEY, AND "WHEAT AND OATS." LOSS OF 39.

NITROGENOUS MATTERS IN BARLEY.	AVERAGE IN "WHEAT AND OATS."
 15.	14.61 

Our own original table (see our *Lancet* page, Nov. 24, 1888) was composed with figures from Blyth. Here it is:—

NITROGENOUS MATTERS IN BARLEY AND SUBSTITUTION MIXTURE—NO GAIN.

NITROGENOUS MATTERS IN BARLEY.	MIXTURE "WHEAT AND OATS" TO BE SUBSTITUTED FOR BARLEY.
12.1	12.075

But here is the most astonishing table of all (from our *Lancet* page, October 27, 1888):—

CARBO-HYDRATES IN BARLEY, WHEAT AND OATS.

BARLEY.	WHEAT. 251 Analyses.	OATS (Ground).
82.2	67.89	55.43

It is said "if we turn from the opinions of

authorities"—but we should not turn from them. We should face them. Here they are:—

One authority writes:—"Barley has been prepared for the purpose of malting from time immemorial. Its adaptation to this use depends partly upon the structure of the grain, which is such that its husk affords protection to the sprout or acrospire during germination, thus preventing its becoming blighted. Barley also contains a larger proportion than any other cereal of soluble albuminoids and of soluble phosphates; both of these substances, according to Liebig and Von Bibra, preserving a constant relation."

Muspratt says:—"Any of the cereals may be employed in the preparation of malt, but barley is preferred for this purpose because experience has demonstrated that it contains the largest percentage of diastase."

Bersch says:—"In the manufacture of malt, those grains only are used in which during germination diastase is developed, and among them barley takes the first rank."

Müller says:—"Other grains, such as wheat, oats, rye, and even Indian corn may be malted, but experience has shown that barley is the grain best adapted to the process. It yields the largest quantity of diastase."

GENERAL.

Parkes says:—"Barley contains rather more protein bodies than wheat;" and Muspratt states "that the great variations found in wheat do not occur in barley." Exceptional Russian or American wheats do not affect the question, and even they vary widely; nor do exceptional barleys affect it. Barley "is certainly very nutritious, and the Greeks trained their athletes on it. Its richness in phosphoric acid and iron renders it particularly adapted for this" (Parkes). "In the time of Charles I., barley meal almost entirely took the place of wheat as the food of the common people, especially in the North of England" (Blyth). Wheat not only falls far below barley in carbo-hydrates, but is "deficient in fat and in vegetable salts which may form carbonates in the system" (Parkes). "Oats are a good all-round food," for they contain 6 per cent. of oil, a fair amount of proteids, and they are half starch, &c.; but, of course, the oil is of no account in malting.

VERDICT.

The *Lancet* reports that "Kepler Extract of Malt is the best"; the *Med. Times & Gazette*, "by far the best"; the *Med. Record*, "undoubtedly the best"; the *Med. Press*, "delicious to the taste."

Kepler Extract of Malt and Kepler Extract of Malt with Cod Liver Oil (Kepler Solution) supplied to the Trade in $\frac{3}{4}$ -lb. and $1\frac{1}{2}$ -lb. bottles, at 22s. and 38s. per dozen. Retail prices, 2s. 6d. and 4s.

BURROUGHS, WELLCOME & Co., Snow Hill Buildings, LONDON, E.C.

Above Prices subject to usual Discount.

Photo-micrographs:

THE KEPLER SOLUTION

Compared with Emulsions of Cod Liver Oil.

An Ideal Form of Fat.

Cod Liver Oil rarely agrees when taken plain or on an empty stomach; in either case it is apt to derange the digestive organs, and even cause vomiting and diarrhoea. The more intimately fat is incor-

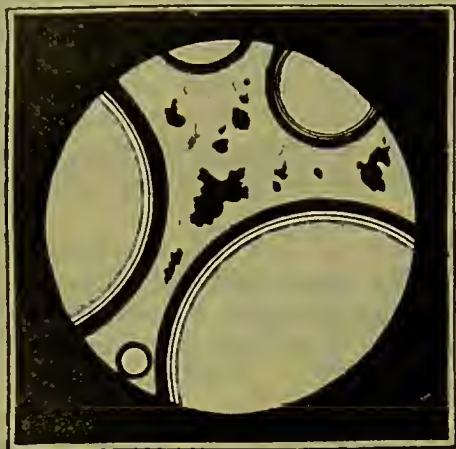


PLATE I.—A FAIR EXAMPLE OF THE COD LIVER OIL EMULSIONS OF THE MARKET, MAGNIFIED 400 DIAMETERS.

porated with the food we eat the more likely is it to agree with the stomach. Realising this, manufacturers have resorted to alkalies, etc., to subdivide cod liver oil, and lost sight of the fact that it is a food. The adjuvants were objectionable,



PLATE II.—EMULSION OF OIL AND MILK, MAGNIFIED 400 DIAMETERS.

and the mixtures oily, exciting disgust. "In all oil emulsions oil globules can as a rule be discovered without difficulty" (Godwin Clayton).

Plate I. represents an emulsion strong with essential oils and gums. So coarse are the oil globules, that a segment of one of them occupies a goodly part of the field. What wonder that many maintain that it is better to give cod liver oil plain than in emulsion!

Plate II. represents what is claimed to be the most finely divided of all emulsions. Not only does it go "queer," throwing down a precipitate, etc., but the size of the large circles (the small ones are milk) conveys a good idea of how indigestible must be the oil in even the *best* of emulsions.

The microscopic appearance of the globules in milk (Plate III.) forms a strange contrast with that of the two preceding products mentioned. The fat of milk is of course in a highly assimilable form.

Kepler has recently discovered a process by which cod liver oil can be perfectly dissolved in a

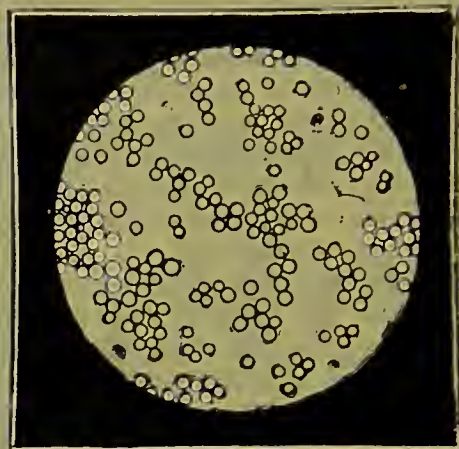


PLATE III.—PURE MILK, MAGNIFIED 400 DIAMETERS, SHOWING OIL GLOBULES.

properly prepared extract of malt. This product is called the *Kepler Solution*. It is more quickly absorbed and assimilated than any other known form of cod liver oil preparations. It is as sweet and palatable as cream. *Kepler Solution* does not dis-

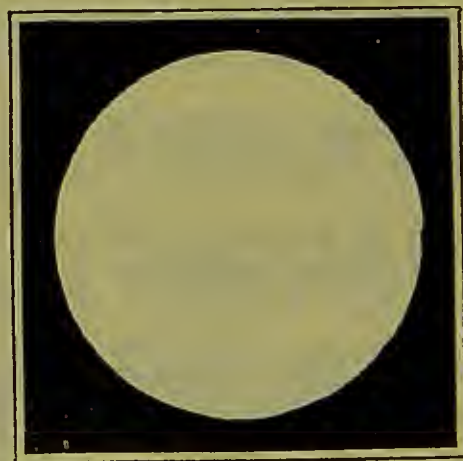


PLATE IV.—Kepler Perfect Solution* of Cod Liver Oil, Magnified 400 Diameters.

turb the stomach like emulsions, and "under the microscope (Plate IV.) no oil globules are visible, and the field is perfectly clear." It is simply a combination of two foods—oil dissolved in malt—and this is why it agrees better than oil and chemicals. It is in no sense an emulsion, for, as Mr. Godwin Clayton says, "its constituents are in a condition of more intimate admixture, namely, that of Solution."

Supplied to the Trade in $\frac{3}{4}$ -lb. and $1\frac{1}{2}$ -lb. bottles at 22s. and 38s. per doz. Retail at 2s. 6d. and 4s.

* "An ideal form for administration of fat."—*British Medical Journal*.

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.

ABOVE PRICES SUBJECT TO USUAL DISCOUNT.

Lanoline (Liebreich).

BENNO, JAFFÉ AND DARMSTAEDTER, BERLIN.

LONDON.]

MAY 18th.

[1889.

The absorbability and absorptive power of the base employed in any ointment must largely determine its relative worth. Now, it is the case that vaseline and paraffin actually impede absorption by the skin. Though the petroleum fats are of a good consistence, do not turn rancid rapidly, and are protective, they are poorly absorbed, do not mix to any mentionable degree with water, and irritate the skin extremely. Of course such bases as lard, beef-suet, vaseline fats, wax, spermaceti, etc., or the mixture of starch with glycerine and water, are comparatively unabsorbable. Though Lanoline is not quite so smooth as vaseline, medicines can be incorporated with it to a degree which cannot be attained with vaseline or, indeed, with any other body of a like nature. It has the advantage that the skin, after being rubbed dry with a cloth, still remains soft and pliable, and silk or paper passed over it retains no grease stain. Again, as a rule medicines mix poorly with fats, and, moreover, fats are more or less likely to decompose. Lanoline (Liebreich) is perfectly preservable, never yielding fatty acids, though it darkens on exposure on account of the evaporation of water.

So absorptive is Lanoline that it takes up over 200 per cent. of its own weight of water without losing its salve-like consistence, and by well triturating in a mortar Lanoline will make a perfect cream with warm water. It combines with vaseline, paraffin, oils, fats, balsams, &c., being perfectly miscible with all medicaments. Through the agency of Lanoline these substances may be quickly introduced into the system. When mixed with any of the glycerine fats it acts as a preservative, preventing rancidity, and rendering them perfectly sterile. It does not stimulate like petroleum products nor irritate like ordinary ointments, and is not saponifiable with alkalis. Lanoline exerts a healthful action on the integument, and may be rubbed into the skin after washing, leaving it soft and smooth, with the surface free from grease. Lanoline is free from the objections raised against all means hitherto at hand for the administration of medicines by the skin.

Dr. Oscar Liebreich says:—"From its use in over 400 cases in the hospital and private practice of Dr. Lassar, the dermatologist, *no irritation of the skin was ever produced*, a result which my own experience, during the years in which I have been experimenting with it, confirms. For this reason alone, it is to be highly recommended for massage. It was further-

more observed in Dr. Lassar's clinic that the *most irritable skin would bear Lanoline* when all other fats caused oedema and irritation."

In preparing ointments with Lanoline in combination with vegetable extracts no fat need be added. With certain substances, such as the carbonate of lead or lead plaster, one part of lard or two of oil (or at least 20 per cent. of either) should be added to Lanoline. The same is the case with the salts of mercury and zinc, and chrysarobin, etc. Lanoline mixes well with the various oleates, yielding an unguent of suitable consistence.

Besides cholesterine, this fat contains other substances which are similar to cholesterine, but which have nothing in common with glycerine. In order to give an idea of the difference which exists between the two sorts of fat, we may mention that cholesterine fats are not decomposed by boiling with alkaline solutions; that is to say, they do not form soaps; while, on the other hand, glycerine fats are easily split into soap and glycerine when treated in the same way. The decomposition of cholesterine fats into fatty acids and cholesterine or cholesterine-like substance can only be produced by the action of a strong solution of alkali in alcohol. We have, therefore, to deal with a very stable chemical compound.

It has been found necessary by some physicians to dilute the Lanoline in order to make it of a more suitable consistence for dispensing with medicaments, we have therefore prepared an article which we now offer at reduced price for the use of hospitals and charitable institutions. After numerous experiments the Lanoline Base (Unguentum Lanolini) and the Anhydrous Lanoline Base were determined upon. The independent penetrating action of the Lanoline being thus maintained, the paraffin bases (Cerasin and Paraffinum Liquidum) act as a protecting varnish to the part to which the ointment is applied.

Reduced Prices of Lanoline:—Lanoline supplied to the Trade in 1-lb. and 7-lb. tins at 2s. 8d. per lb. Anhydrous Lanoline (Lanolinum anhydricum) at 3s. 4d. per lb. Lanoline Base (Ung. Lanolini) 2s. 2d. per lb. Anhydrous Lanoline Base, 2s. 10d. per lb. Cerasin, 1s. 6d. per lb.; Paraffinum Liquidum, 1s. per lb. (packages extra). Lanoline Cold Cream supplied in pots at 14s. per doz. Lanoline Hazeline Ointment, in pots at 14s. per doz. Lanoline Pomade, in pots at 14s. per doz. Lanoline Toilet Soap, 8s. per doz. Lanoline Eucalyptine Soap, 8s. per doz. Toilet Lanoline, in tubes, at 4s. 6d. per doz.

A Circular on the "Place of Lanoline in Pharmacy," giving formulae, &c., will be sent post free to any chemist on request.

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 HOECHST a/m GERMANY.

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Prof. Germain Séz says:—"It is the remedy for pain."
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BURROUGHS, WELLCOME & CO., Wholesale Agents.

FAHLBERG, LIST & CO.
 GERMANY.

SACCHARIN.

THE HEALTHFUL SUBSTITUTE FOR SUGAR.
 Note the Reduction in Price of Saccharin Tabloids.
 25 Retail for 6d., 100 for 1/-, 200 for 1/9.
Burroughs, Wellcome & Co., Joint Agents, Great Britain.

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THE SAFE AND RELIABLE HYPNOTIC.
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Sold by BURROUGHS, WELLCOME & CO.

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"The introduction of which has probably done more than any other therapeutic measure of recent times to lessen infant mortality."—*British Medical Journal*.
 Pepsin in Scales and Powder, ¼-oz. and 1-oz. bottles, 23/- and 60/- per dozen.
 Zymine (Ext. Pancreatis), ¼-oz. and 1-oz. " 20/- and 60/-
 " Peptonising Powders, 1 dozen tubes in box, 18/- per dozen boxes.
 Pepsin Tabloids, 25 and 100 in bottles, 14/- and 42/- per dozen.
 Zymine Tabloids and Zymine Comp. Tabloids, 25 and 100 in bottles, 18/- and 48/- per dozen.
 Suppositories (Meat and Milk), 1 dozen in box, 22/- per dozen boxes.
 Trypsin (Pure), 1-drachm bottles, 54/- per dozen.
BURROUGHS, WELLCOME & CO., LONDON, E.C.

DR. VON HEYDEN NACHFOLGER,
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B. W. & CO., Wholesale Consignees, Great Britain.

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Stand No. 225.—Industrial Section.—Burroughs, Wellcome & Co.

Tabloids, Pinol and Preparations, Lanoline and Preparations, Medicine Chests, Hazeline, and growing plants of the *Hamamelis Virginica*, Hypodermic Tabloids and Hypodermic Tabloid Cases, Tincture Presses, Pharmaceutical Stills, Bishop's Salts, &c.

Stand No. 289.—American Section.—Lundborg's Perfumes, New York.

Edenia, Tally-ho, Fascination, Goya Lily, Alpine Violet, Lily of the Valley, and Maréchal Niel Rose.

THE SILVER FOUNTAIN,

which is a gem in its way, will form a very attractive feature of this Exhibition, as it did at the Centennial Exhibition in 1876, and at the American Exhibition (London) in 1887. Visitors to the Exhibition will have an opportunity of testing these delicious Perfumes.

Stand No. 267.—American Section.—Colgate & Co., New York.

Cashmere Bouquet Soap and Cashmere Bouquet Extract.

Stand No. 594.—American Section.—Fairchild Bros. & Foster, New York.

Digestive Ferments, such as Pepsin in Powder and Scales, Trypsin, Zymine (Ext. Pancreatis), Zymine Peptonising Powders, Zymine Tabloids, Zymine Comp. Tabloids, Zymised Suppositories.

N.B.—The attendants at the various stands will be pleased to furnish visitors with all information desired.

Appended is a List of the Awards received for the
above Preparations:—

Adelaide Exhibition, 1887—4 Diplomas of the First Class.

American Exhibition (London), 1887—12 Medals and
Certificates.

Anglo-Danish Exhibition (London), 1888—Diploma of Honour.

Barcelona Exhibition, 1888—2 Gold Medals.

Brussels Exhibition, 1888—2 Gold Medals.

Calcutta, 1883-4—3 Gold Medals, 4 Silver Medals, 5 Bronze
Medals, and 2 Certificates.

Cardiff Exhibition, 1888—1 Gold Medal.

Edinburgh Exhibition, 1886—1 Silver Medal.

Liverpool Exhibition, 1886—1 Gold Medal.

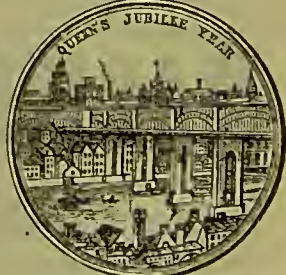
Newcastle-on-Tyne Exhibition, 1887—1 Gold Medal and
3 Silver Medals.

Nice Exhibition, 1883-4—1 Gold Medal.

Ostend Exhibition, 1888—7 Gold Medals, 1 Silver Medal,
and Diploma of Honour.

Health Exhibition (Bolton), 1887—1 Bronze Medal.

Health Exhibition (London), 1884—1 Silver Medal and
1 Bronze Medal.



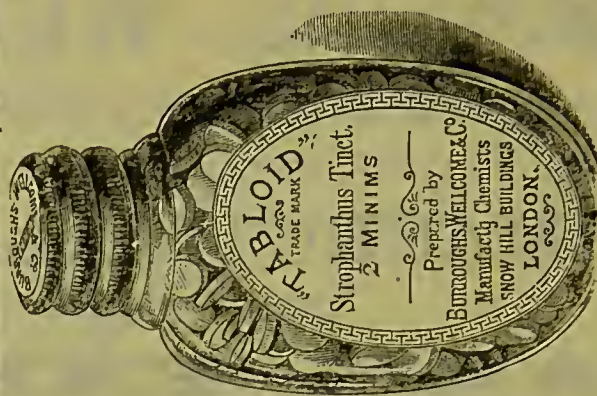
STROPHANTHUS

(African Arrow Poison).

ACTION.—"Strophanthus" increases the cardiac systole, and in small doses slows the contractions. The action of the heart is accompanied by a rise in blood pressure, which appears to be directly produced by the drug. In disturbances of the circulation, when the blood tension was unduly low, Strophanthus was capable of producing a diuretic effect" (Fraser). It exerts a much more powerful action upon the heart, and a less powerful action upon the blood-vessels, than digitalis.

USES.—"Strophanthus," writes Dr. Fraser, may "be used with advantage in all weak states of this organ, whatever the cause of weakness," but in case of degeneration, or sufficient compensatory change, will probably do little good. Not only will it often dissipate the uræmic symptoms in Bright's disease, but in contracted kidney with dropsy it has quickly induced sleep and caused free diuresis. In Bright's disease, with its concomitant symptoms, is in most cases invaluable, and some have obtained good results in the anasarca of hepatic cirrhosis and chronic peritonitis. While in purely bronchial and nervous asthma it is not so beneficial, its beneficent effects in the dyspnoea of cardiac and renal diseases have been most marked. It is not a stimulant, but a cardiac tonic.

Dose.—"The tincture (1 in 20) may be taken in doses of from 2 to 10 drops, the former being a small dose. The tabloids contain each two drops of the tincture.



The safest and most convenient form for administration.
TABLOIDS.—Strophanthus (2 minims of Tinct. in each), 100 in bottle, retail 2s. each, to the trade 16s. doz. Strophanthus Tincture in 1-oz. and 1-oz. bottles at 4s. and 6s. per doz. 1-lb. bottles 6s. each.

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See Recommendatory Notice of Medical Press and Opinions of the leading Dermatologists.

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From the *Lancet*, Dec. 22, 1886 :—"In our hands it has been a most effective agent in skin diseases, especially of the chronic eczematous class, and one class of psoriasis which had resisted all other kinds of treatment speedily got well under the application of the *Liquor Carbonis Detergens*. We esteem it a very valuable addition to our list of skin remedies."

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CARBONIS

DETERGENS.

Extract from the Proceedings of the Royal Society of Edinburgh :—"Experiments on the Chief Disinfectants of Commerce, with a view of ascertaining their power of destroying the spores of the 'Anthrax Bacillus,' by a Medical Officer of Health and Public Analyst. A 10 per cent. solution of *Liquor Carbonis Detergens*, acting for four hours, distinctly retarded growth of Anthrax, for the spores, whether in gelatin-pork or in the broth, did not commence developing for 24 hours. Undiluted *Liquor Carbonis Detergens*, acting for four hours, arrested future growth."

The *Practitioner* of September, 1881 :—"Eczema connected with varicose veins of the leg—also Pruritus Scroti, Lahiorum, and Ani—is best relieved by weak tarry lotions, one of the best of which is *Wright's Liquor Carbonis Detergens*."

P. McLEOD, Colonel R.A., Inspector-General of Ordnance, Ordnance Office Madras, writes Sept. 10, 1887 :—"I can certify that 'Liquor Carbonis Detergens' has cured me of a PSORIASIS of 21 years, incurred in Burmah, after every effort of such an able skin doctor as Sir Erasmus Wilson had failed."

From the *Medical Times and Gazette* Jan. 19, 1867 :—"We have more than one called attention to the value of this remedy in chronic eczema."

From the *British Medical Journal*, Sept. 22 1887 :—"We have tested it, and can affirm its value as a detergent agent. We consider the Liquor is an article of great utility."



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IS A REMEDY DISCOVERED BY INTUITION, AND FOUND, BY EXPERIENCE, TO BE INVALUABLE, OBTAINED, MANY YEARS SINCE, FROM THE CREEK INDIANS—ONE OF THE SAVAGE TRIBES OF NORTH AMERICA—ITS MERITS HAVE BECOME KNOWN AND APPRECIATED THROUGHOUT THE CIVILIZED WORLD. ITS SUCCESS IN THE TREATMENT OF ALL DISEASES THAT RESULT FROM BLOOD TAIN OR BLOOD POISON HAS BEEN UNPRECEDENTED, THOUSANDS WHO HAVE BEEN GIVEN UP AS HOPELESSLY DISEASED, HAVING BEEN HEALED AND MADE HAPPY BY ITS HEALTH-GIVING PROPERTIES. IT Cures Scrofula, Eczema, Rheumatism, Old Sores, Cancer, Catarrh, Contagious Blood Poison, &c. AND CONTAINS NO MERCURY, IODIDE OF POTASH, ARSENIC, NOR ANY OTHER POISONOUS DRUG.

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AMERICAN FIRMS reached by this issue of THE CHEMIST AND DRUGGIST are first of all invited to subscribe to this paper. They can do so by remitting \$2.50 to our agents, Mr. H. V. Dakers, 45 Liberty Street, New York, or Messrs. Evans & Sons (Limited), Montreal.

Any American firms wishing to do business with Great Britain or the British Colonies will do well to communicate at once with our Mr. T. E. Parker (care of Mr. Dakers as above), who is now travelling over the North American continent, and who will, if possible, visit them personally, or will certainly reply to their communications by letter. He will be glad to be of service in any case where business is intended.

We advise American firms who wish to canvass the drug trade of Great Britain and the Colonies to prepare a circular for insertion with our issue of July 27, which will be distributed to 11,000 of the best firms so located. The circular must be on pages (of any colour) of size similar to the pages of this journal, and must bear the words "Supplement to THE CHEMIST AND DRUGGIST, July 27, 1889," at the head of each page. We must receive 11,000, each separately folded, not later than July 22, and we will guarantee a perfect circulation of them to a register of names such as no one else possesses. The cost of insertion and circulation of 11,000 will be:—For a 2-page circular, 8l. 5s. (\$41.25); for a 4-page circular, 11l. (\$55); for an 8-page circular, 16l. 10s. (\$82); for a 16-page circular, 24l. 15s. (\$123).

POST-CARD COMPETITION.

WE received 592 post-cards anticipating the result of the election of Pharmaceutical Council so far as the first five and the last five names were concerned. Our voters distributed their favours pretty generally, and every candidate finds himself either at the top or bottom of the poll at least once. Messrs. Broad, Martin, Newsholme, and Watt find no backers for the premier position, and Messrs. Allen and Schacht are not relegated to the tip of the tail by anybody. The following shows the voting as far as first and last appear on our cards:—

Top of poll.		Bottom of poll.		Top of poll.		Bottom of poll.	
Times.		Times.		Times.		Times.	
Abraham ..	13	22	Leigh ..	8	29		
Allen ..	26	0	Martin ..	0	10		
Bottle ..	30	3	Martindale ..	37	0		
Broad ..	0	42	Newsholme ..	0	18		
Butt ..	1	16	Nichol ..	3	54		
Carteighe ..	119	1	Schacht ..	10	0		
Cross ..	1	9	Southall..	23	5		
Greenish ..	41	2	Watt ..	0	54		
Hills ..	8	7					

We shall announce the winners of the prizes next week.

The Chemist and Druggist of Australasia.

The following are the principal contents of the April number to hand by last mail:—

EDITORIAL NOTES.

The Two Annual Meetings (referring to the annual meetings of the Pharmaceutical Societies of New South Wales and Victoria)—Important to Chemists Non-resident in Victoria—Rough on Rats in Victoria—Pharmacy Board and Pharmaceutical Council.

COLONIAL REPORTS.

New South Wales.—Pharmacy Board; Official Report of Monthly Meeting—Pharmaceutical Society; Official Report of Annual General Meeting; Preliminary Examination Papers of the Pharmaceutical Society—Comments on the Annual Meeting for Various Matters connected with the Society—University, General, and Trade Items.

New Zealand.—Pharmacy Board; Official Report of Ordinary Meeting—The Midland Pharmaceutical Association of New Zealand; Official Report of Monthly Meeting—The Auckland Chemists' and Druggists' Association—Friendly Societies' Dispensary for Christchurch—Annual Meeting and Report and Balance-sheet of Kempthorne, Prosser & Co.'s New Zealand Drug Company (Limited)—General and Trade News.

Queensland.—Pharmacy Board; Official Reports of Special and Monthly Meetings—Pharmaceutical Society; Official Report of Monthly Meeting.

South Australia.—Pharmaceutical Society; Official Reports of Monthly Council and General Meetings; Comments on the Bye-laws and Other Matters—Trade News.

Tasmania.—Hobart Trade News—Launceston Comments on the Victorian Preliminary Examination—General and Trade News concerning Launceston.

Victoria.—Pharmacy Board; Report of Monthly Meeting—Pharmaceutical Society; Reports of Monthly and Annual Meetings—The Veterinary Board—Trade Items.

Centennial International Exhibition.—Final Awards—Report of Juries on Pharmaceutical Products, Spices, Condiments, Dye Materials, Cordials, and Waters, &c.—Experts' Reports on Appeal—Perfumery and Toilet Soaps.

Photography.—Continuation of Special Article (the subjects now treated of being the Camera and the Lens).

Commercial Visitors.—Portrait of Mr. Ernest Samson, Foreign Representative of Messrs. S. Maw, Son & Thompson.

Trade Notes—Births, Marriages, and Deaths—Classified List of Patents applied for in all the Australasian Colonies—Trade Marks applied for in Australasia—Partnerships Dissolved.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the exercise in qualitative analysis for this month will be a mixture of two salts. The mixture is to be submitted to a thorough systematic examination, designed to detect the actual constituents of the mixture, and to demonstrate the absence of all other substances. Students' reports should contain a concise account of the work done, and should include a list of the metals and acid radicles detected, distinguishing any which may be regarded as accidental impurities.

Students' applications for portions of the mixture will be received up to the morning of next Wednesday, May 22, and the samples will be forwarded immediately.

Students' reports will be received up to Wednesday, June 5.

REPORTS.

The mixture of salts distributed for analysis last month consisted of 2 parts of potassium alum, and 1 part of calcium phosphate. The calculated composition of 100 parts of the mixture is:—

Al..	..	..	..	..	..	3.86
Ca..	..	..	..	..	..	12.90
K ..	..	..	..	..	..	5.48
SO ₄	..	..	..	..	..	26.93
PO ₄	..	..	..	..	..	20.43
H ₂ O	..	..	..	..	..	30.35
						100.00

A trace of chlorine was the only impurity of any note.

This proved a difficult mixture to analyse, hence the falling-off that has taken place in the number of reports sent in. No less than thirty students out of fifty-one failed to detect calcium, and twenty-eight omitted the phosphoric radicle. In the case of aluminium and potassium the failures were six and ten respectively, while all our correspondents detected the sulphuric radicle.

The difficulty in this case arose from the presence in the mixture of a salt which was insoluble in water, and which, when dissolved in an acid, was precipitated in the original state as soon as the acid was neutralised. The salts of this character most likely to be met with are certain phosphates, borates, oxalates, silicates, and fluorides. In the present case the salt to be dealt with was calcium phosphate. In order to obtain a solution of the mixture an acid was employed; dilute hydrochloric acid was the best to use. Having ascertained that sulphuretted hydrogen gave no precipitate, ammonium chloride and ammonia were added, whereupon a white gelatinous precipitate separated. This might have consisted of zinc hydrate, aluminium hydrate, or one of the salts to which we have referred. That it was not entirely due to zinc was at once apparent from the fact that an excess of ammonia failed to dissolve it. On testing a nitric acid solution of a portion of the gelatinous precipitate phosphoric acid was found. The colour imparted to the flame when the original substance, moistened with hydrochloric acid, was heated on a platinum wire, suggested the probable presence of calcium. It was therefore extremely likely that the white gelatinous precipitate consisted, in part at any rate, of calcium phosphate. Under any circumstances it was necessary to remove the phosphoric radicle before the ordinary methods of analysis could be applied. We must refer

students to their text-books for the particulars of the course to be adopted under such circumstances, and at the same time remind them that no one method is the best under all the various conditions that may arise. A very useful method, and one capable of very general application, depends upon the separation of the phosphoric radicle in combination with iron, by means of an excess of barium carbonate. If this method is employed, of course iron and barium must be sought for separately. The details of the method are very fully described in the last edition of Fresenius's "Qualitative Analysis."

We strongly recommend students who were unsuccessful in their work this time to prepare a mixture similar in composition to that which formed the subject of the exercise, and to repeat the analysis. If this course is adopted, students will see for themselves where their former errors occurred, and they will be unlikely to make mistakes of the kind a second time.

PRIZES.

The First Prize for the best analysis has been awarded to
JOHN W. BYGOTT, 54 St. John's Road, Longsight,
Manchester.

The Second Prize has been awarded to
H. A. ROPER, Plymouth.

Marks Awarded for Analyses:

John W. Bygott ..	..	..	95	Ajax ..	..	..	70
H. A. Roper ..	..	..	92	H. Hamer ..	..	..	65
F. Roper ..	..	..	90	Cinchona ..	..	..	65
F. W. Towan ..	..	..	83	Colon ..	..	..	60
Saponis ..	..	..	85	Danwer ..	..	..	60
Dummodo ..	..	..	85	T. R. Dodgson ..	..	..	60
W. E. Fairweather ..	..	..	85	Alm ..	..	..	55
Crumpsall ..	..	..	85	Rhodium ..	..	..	55
H. Bowden ..	..	..	83	A. B. C. ..	..	..	50
G. W. West ..	..	..	80	Nemo ..	..	..	50
Legarmour ..	..	..	80	Faust ..	..	..	50
J. Rowe ..	..	..	80	F. N. Whitehead ..	..	..	50
J. W. Swainson ..	..	..	75	Anonymous ..	..	..	45
Aniline ..	..	..	75	Pran ..	..	..	45
J. E. W. ..	..	..	75	E. Lambert ..	..	..	45
Moyhitt ..	..	..	75	E. P. Greenhalgh ..	..	..	45
H. W. Colley ..	..	..	75	J. Shaw ..	..	..	45
Silver ..	..	..	73	Y. E. S. ..	..	..	45
Passiflora Eliotta ..	..	..	70	Crucible ..	..	..	45
Novello ..	..	..	70	A. Lazenby ..	..	..	40
Festina Lente ..	..	..	70	Potassium ..	..	..	40
T. H. L. N. M. ..	..	..	70	Chisel ..	..	..	35
A. W. Sikes ..	..	..	70	A. M. S. ..	..	..	30
Cicero ..	..	..	70	W. H. G. ..	..	..	35
Pollux ..	..	..	70	Novice ..	..	..	20
N. S. ..	..	..	70				

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

. All communications should include the names and addresses of the writers.

TITANIUM.—You must remember that the remarks we made on your report were made solely upon the statements in the report; we had no other means of forming any opinion of your work. Your statements seemed so astonishing that we read them several times, and could extract but one meaning from them. It appears, however, that you know more about analytical chemistry than we were led to infer. Our intention was to correct what appeared to be a grave error, and to give you a helping hand. It is a pleasure to learn that you are so well able to assist yourself.

F. W. LOWAN.—You should always give your address.

W. E. FAIRWEATHER.—You could easily have prepared the sodium acetate with sodium carbonate and acetic acid.

H. BOWDEN.—In separating the phosphoric radicle by the methods you employed, a great deal depends upon the use of a sufficient quantity of ferric chloride. It is only by employing a slight excess that you can be sure of having enough.

LEGARMOUR.—The proper place to look for potassium is in the filtrate from ammonium carbonate, after the expulsion of salts of ammonium, and platinum chloride is the most satisfactory reagent to employ.

ANILINE.—On heating the mixture, moistened with hydrochloric acid, in a Bunsen flame, flashes of reddish coloration were observed. This was the first indication of the probable presence of calcium, and it ought to have warned you to expect other indications of that metal at a later stage of the analysis.

MOYHITT.—When you added ammonium carbonate to the filtrate from barium nitrate, you precipitated the phosphates—hence the absence of a precipitate with calcium chloride, and with silver nitrate.

SILVER.—Apparent effervescence on the addition of an acid is scarcely proof of the presence of a carbonate. The gas evolved ought to be examined; its action on lime-water is easily ascertained.

PASSIFLORA ELIOTTA.—If you used an excess of ferric chloride to precipitate the phosphates, of course iron would be found in the filtrate. If you did not use an excess it is highly improbable that the phosphates would be completely precipitated. You omitted to give particulars of the reactions that proved aluminium absent.

FESTINA LENTE.—You had very little to say about the examination for acids. You should give a concise account of the work done.

T. H. L. N. M.—There was very little calcium in the part of the mixture soluble in water. You failed to precipitate this as carbonate, owing, no doubt, to the solution being dilute, and to the presence of ammonium salts in abundance. It was this calcium which subsequently gave the precipitate with sodium phosphate. To confirm the phosphoric radicle, the precipitate with ammonium molybdate may be filtered off, dissolved in ammonia, and magnesium sulphate added, when ammonio magnesium phosphate will appear as a crystalline precipitate.

A. W. SIKES.—It is clear that the precipitate which you supposed to consist of ammonio magnesium phosphate was simply calcium phosphate.

CICERO.—In employing the ammonium-molybdate test for phosphoric acid, it is always best to use nitric acid as the solvent, as the precipitate is more soluble in hydrochloric acid.

AJAX.—It is probable that you did not add enough ammonium carbonate to the acetic acid solution of the precipitate produced by ammonia in the presence of a citrate.

COLON.—You ought to have sent a more detailed account of your work.

DANWER.—In this case nearly everything depended upon the detection of the phosphate. You seem to have concluded that phosphates were absent because you failed to precipitate silver phosphate in the presence of free nitric acid—an acid in which silver phosphate is soluble.

A. B. C.—The blue colour on ignition with cobalt nitrate is as much an indication of certain phosphates as it is of alumina, and the same thing may be said of the white gelatinous precipitate with ammonia.

NEMO.—A mixture having the composition you assigned to the powder would have been readily soluble in water.

FAUST.—See remarks to "Nemo."

F. N. WHITEHEAD.—You did not employ any test which would have detected the phosphoric radicle.

PRAX.—You ought to study the reaction of phosphates with ammonium molybdate experimentally. The test is a valuable one, but unless you thoroughly understand the precautions to be observed, you cannot have much confidence in your results.

E. LAMBERT.—How you managed to get a white precipitate with sulphuretted hydrogen in an acetic acid solution is a mystery. Try the experiment again; it is easy to prepare a mixture of the composition given above.

J. SHAW.—We do not ask students to give equations, because as a rule they can be copied out of books. If it was the nitric acid solution, neutralised, that you examined for the phosphoric radicle, your failure to detect it is not to be wondered at; you could not neutralise the solution without precipitating the phosphate.

Y. E. S.—The solution prepared with sodium carbonate and hydrate for the examination of the acids would of course be strongly alkaline, yet you state that it gave no precipitate with silver nitrate, which is quite impossible. If you neutralise the solution or add an excess of acid you ought to have mentioned the fact.

POTASSIUM.—The sulphates of magnesium and potassium, or any mixture of them, would be completely and easily soluble in water; therefore the mixture could not have had that composition, as it was not completely soluble, as you yourself observed. It would appear that you did not add enough ammonia to the hydrochloric acid solution. As a group-reagent ammonia must always be added until the solution smells distinctly of ammonia after it is well mixed.

A. M. S.—A separate analysis of the soluble portion might have helped you, though it was not necessary. The phosphate was the cause of your trouble.

W. H. G.—Your analysis was very incomplete. You had not merely to prove that certain substances were present; everything else was to be proved absent. You did not add an excess of ammonia to the acid solution.

NOVICE.—A tartrate would have revealed its presence when the dry mixture was heated in a tube: it would have carbonised and produced a smell like burnt sugar.

Metropolitan Reports.

BRITISH MEDICAL ASSOCIATION.—A conversazione in connection with the Metropolitan Counties Branch of the British Medical Association took place at the South Kensington Museum on Wednesday. The president and various members of the Council received the numerous company which responded to their invitation.

"MULTUM IN PARVO" SHOP-FITTING.—Messrs. Holl & Co. have opened a tiny and pretty pharmacy at 69 Eastcheap, E.C. It has been handsomely fitted up by Messrs. Larke & Sons, Fore Street, E.C., and is an example of utility combined with effect in a very limited area, the ground plan being, as near as possible, 16 feet by 13 feet. This in the City, however, is no rarity, Mr. R. H. Cooper, Royal Exchange, with a space of 14 feet by 12 feet, tapering off to only 5½ feet, having given Messrs. S. Maw, Son & Thompson the opportunity to produce a perfect gem, in rich walnut, with mirrors and curiously tessellated pavement; while Messrs. Lamplough & Co., of Broad Street, in a less elaborately fitted shop, under 7 feet in width, found it possible to supply the wants of nearly two thousand customers one day this month.

TINCTURE OF RHUBARB.—Messrs. Wright & Pollard, chemists, of Glenthorne Road, Hammersmith, were summoned last week, at the Hammersmith Police Court, for selling a liquid called tincture of rhubarb, the same not being of the substance and quality demanded. Mr. Cockburn, clerk to the Hammersmith Vestry, supported the summons, and called Mr. Oatley, the inspector, to prove the purchase. He said on March 20 he went into the shop of the defendants and purchased 6 oz. of tincture of rhubarb, for which he paid 2s. After the completion of the purchase he told Mr. Pollard the purpose for which he required it. He then said he did not wish the public analyst to know how he made his tinctures. The certificate of the analyst (Mr. R. H. Davies) was produced, showing that the tincture was deficient in alcoholic strength. Mr. Pollard attended and pleaded guilty, and the bench imposed a penalty of 10s., with 2s. costs. The vestry are, apparently, highly pleased with the result of the prosecution. At their last meeting the clerk, in reply to Dr. Coker, said that the analysis showed a deficiency of solids to the extent of 9 per cent. Mr. Cosh asked if the Act of Parliament did not sanction a record of the conviction being posted on the premises where the offence was committed. The clerk answered in the negative, and said the publication of the offence in the press was considered sufficient.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

MR. REEVES, chemist, of New Street, is giving up his Solihull business, which he has carried on for a considerable time.

MR. JOSEPH SPENCER, chemist, of Great Colmore Street, is opening additional premises, and advertises that he is prepared to administer gas and draw teeth at the nominal charge of 2s. 6d.

MR. JOHN BARCLAY, son of Councillor Barclay (Southall Brothers & Barclay), of this city, was amongst those who this week received a B.Sc. degree and cap and gown at the London University.

FORTHCOMING CHEMISTS' CRICKET-MATCH.—The first match of the season of the Midland Counties Chemists' Association Club will take place on Friday next, when the members will meet the employes of Messrs. Southall & Barclay at the Langley Cricket Ground, Small Heath.

EDUCATION.—At the Preliminary examination held in Birmingham eighteen candidates presented themselves and

fourteen passed. This shows a marked improvement over last examination, when so many failures were recorded. One lady only presented herself, and she was successful. She possessed the name of the Great General, and, it is said, is no distant relative.

THEFT FROM A PHARMACIST.—A daring theft has recently been committed at the chambers of Mr. F. H. Alcock, analytical chemist, Broad Street Corner. Mr. Alcock occupies two rooms. Whilst he was engaged in one of them a thief, in the middle of the day, slipped into the other, took down Mr. Alcock's overcoat (a valuable one) from the rack, and made off with it. The offender has not yet been captured.

SINGULAR ACCIDENT AT A CHEMIST'S.—An accident, which, singularly enough, occasioned but very slight damage, occurred this week at the fashionable chemist's shop of Mr. T. W. Chapman, of Bristol Road. A 4-gallon carboy was suspended by a wire from the ceiling, over a window encased with costly glass. The wire snapped, and the vessel, which was filled with liquor, fell amongst a pile of feeding-bottles and other material of a similar nature. Although the carboy was of considerable weight the fall did not smash any of the articles.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—A meeting of the council of the Association was held on Tuesday at the Mason College, under the chairmanship of Mr. G. E. Perry (President). The report to be presented to the next meeting of the Association was considered but not finally adopted, and a discussion took place upon the question of officers for the ensuing session. We understand that Mr. Perry, whose position as President expires at the end of the session, will not offer himself for re-election, and that it is likely that a pharmacist from an adjoining city, who has taken a lively interest in the affairs of the Association, will be appointed. There will also, we are informed, be alterations made as regards other officers. As already stated in this column, the final meeting of the Association is to take place on Tuesday next at the Mason College at half-past eight o'clock. The book-case recently purchased by the Association has been placed in one of the corridors of the College. The whole of the books of the organisation will be at once transferred to it, and, under certain conditions, will be available for the use of members.

HULL.

TAYLOR'S DRUG COMPANY (LIMITED) are carrying on a twenty-two days' spring sale of surplus goods, including drugs, patent medicines, &c., "to be cleared at close upon cost, and in some cases below cost price." Similar sales have been referred to in other places where this company have establishments.

LIVERPOOL.

MR. H. JACKSON, of the firm of W. & H. Jackson, has been unanimously elected "people's churchwarden," at the vestry meeting of St. Philip's, Litherland.

CARBOLIC-ACID POISONING.—An inquest was held on Tuesday on the body of George Henry Reed, a pawnbroker, who purposely swallowed some carbolic acid on Sunday while in a depressed state after a drinking bout. The jury returned a verdict in accordance with the evidence.

NEW PHARMACY.—Mr. Richardson, of Fern Grove, near Sefton Park, has just opened a new shop close to the end of Smithdown Road, on the opposite side of the park, in an excellent neighbourhood. The premises were originally intended for Mr. Dale, of Park Road, but his interest has been purchased by Mr. Richardson. The shop is tastefully fitted.

THE dissolution of partnership of the firm of Messrs. Clay, Dod & Co., the wholesale druggists of St. Anne Street, announced in this week's *Gazette*, regards only Messrs. J. T. Shipton and A. Pettitt, whose association with the firm expires by effluxion of time. The business is carried on by the three remaining partners, Messrs. T. H. Dod, W. H. Leatham, and T. F. Driver, who have been connected with the firm for a period of twenty-five years.

MERSEY TUNNEL.—The Mersey Railway Company having succeeded in raising 200,000*l.* in debentures for the completion of the line is now about to construct a station in the centre of the city, the approach to be from the basement of the Lyceum, in Ranelagh Place. Chemists, as well as other business people, in Birkenhead have long been complaining that much business has been brought to this side of the water, to their disadvantage, by the railway, and it seems probable that this state of things will be accentuated when it disgorge its bulk of passengers close to Lewis's. A station in such a central position, and close to the Cheshire Lines Railway, will, however, be an undoubted public convenience.

PHARMACEUTICAL STUDENTS' SOCIETY.—A meeting was held in the recently-acquired rooms, Colquitt Chambers, 6 Colquitt Street, on Thursday, May 9, Mr. H. B. Thornton, president, presiding. The society now numbers over fifty members, and there were twenty-four present on this occasion. A paper was read by Mr. Harold Wyatt on caffeine, which possessed considerable interest and gave rise to a good discussion. Specimens were lent by Messrs. Evans, Sons & Co., Liverpool, Messrs. Fry & Sons, Bristol; also specimens of the Kola plant and Kola nuts from Messrs. Thomas Christy & Co., London. This will be the last general meeting until the autumn, but during the summer it is intended to organise several botanic excursions, which will afford both recreation and instruction to the members.

ALLEGED POISONING.—Considerable excitement has been caused here by the death, last Saturday, under suspicious circumstances of Mr. James Maybrick, a well-known cotton merchant, at his residence, Riversdale Road, Grassendale. The deceased enjoyed good health, and the suddenness of his death leads to the supposition that he succumbed to poisoning by strychnine. An inquest on the body was opened on Tuesday, before Mr. S. Brighouse, county coroner, at the Aigbarnth Hotel, Aigbarnth. The inquiry was of a purely formal character. The Coroner said there had been a post-mortem examination made by Dr. Humphreys on Monday, the result of which was that poison was found in the stomach of the deceased in such quantity as to justify further examination by a competent analyst, and on the result of that would depend whether or not criminal proceedings against some person would follow. The inquiry was adjourned for a fortnight. Mr. Edward Davies, F.C.S., F.I.C., &c., of the Royal Institution Laboratories, is engaged on the chemical investigation of this matter, and the indications so far are those of arsenic; and other evidence, we understand, has been gathered which points to arsenic rather than strychnine being the poison which Mr. Maybrick died from.

BOTANIC HUNTING-GROUNDS.—The difficulties of prosecuting the study of botany from nature near large towns is always greater than in rural districts. Firstly, because a less number of plants grow in such positions, and, secondly, because the herbalists, who are always on the look-out, soon clear them away when found. It may be useful, therefore, to indicate from time to time where certain specimens are obtainable, or the best localities in which to search for them. Although sunshine and showers have during the past fortnight done much to advance vegetation, the season cannot be regarded as an early one; still we are rapidly approaching the botanist's most busy season. Whilst this part of Lancashire yields but a limited number of specimens, the Cheshire side of the Mersey is fairly prolific in them—no doubt in some measure due to the fact that the influence of the Gulf stream on the atmosphere is more markedly felt. Our botanic gardens furnish specimens of a large number of plants, but additional interest and instruction is gained by seeking out each plant in its wild condition of growth with its natural surroundings. In our woods the commonest plant is the *Scilla nutans*, Sm., or English bluebell, belonging to the Liliaceæ, and also a near relation to the official *Scilla italica*, or squill. It has been used by herbalists as a diuretic, thus showing a therapeutical relation also to the official plant. Another plant common now in our woods and hedges, and very interesting from many points of view, is the curious-looking *Arum maculatum*, L., one of the few British members of an order largely represented in the tropics, the Araceæ. The leaves are poisonous, but the tuberous roots contain starch, and in times of famine have been used largely for food. Medicinally, it is also used by

herbalists in gout and rheumatism. Botanically, it is interesting as giving an excellent example of a spathe and spadix, the lower flowers on the spadix being female and the upper male; the perianth is altogether wanting. The leaves also are noticeable as being among the few British examples of hastate-sagittate leaves. Microscopically, it is interesting from the abundance of raphides in its cells. Those of our readers who live in the Isle of Wight or Channel Isles may have the good fortune to find the rare *Arum italicum*, Mill., distinguished from the common plant by its larger size and yellow, not purple, spadix. In salt marshes and on the muddy parts of the sea coast may be found the three scurvy grasses—*Cochlearia anglica*, L., *Cochlearia danica*, L., and *Cochlearia officinalis*, L., the first having ovate oblong radical leaves, the second cordate and somewhat lobed ones, and the third cordate-reniform. The flowers are white, and the dense patches quite enliven the dreary flats of some of our large salt marshes on the banks of the tidal rivers. Botanically they are related to the horseradish, *Cochlearia Armoracia*, L. Medicinally they are used in scurvy, especially *C. officinalis*, the following being a recipe known as "Sydenham's Electuary," and ascribed to the celebrated Dr. Sydenham, of Sydenham's Laudanum (vinum opii) renown:—

Fresh conserve of scurvy grass	3ij.
Conserve of wood sorrel	3j.
Compound powder of arum	3ij.

Mix, and add syrup of orange q s. to make an electuary.

Dose, 3ij. three times a day.

A spirit also was made from the plant by distillation with rectified spirit and water. Other plants belonging to the natural order Cruciferae now in flower are *Sisymbrium Alliaria*, Sm., with reniform sinuate-dentate leaves, small white flowers, and an odour of garlic; *Cardamine pratensis*, L., the cuckoo-flower; *Cardamine flexuosa*, With.; *Cardamine hirsuta*, L.; *Cardamine amara*, L., a handsome but local plant like the cuckoo-flower, excepting that the leaves are broader, the flowers white and anthers purple; *Barbarea vulgaris*, Br., and *B. praeox*, Br., with yellow flowers and lyrate leaves. As representatives of Rosaceae we may find in the hedges *Pyrus Malus*, L., the crab-apple; *Crataegus Oxyacantha*, L., the hawthorn; and *Prunus Avium*, the bird cherry; also in healthy places *Potentilla Tormentilla*, Sibth., a plant with small buttercup-like flowers and lower leaves quinate and stalked, upper leaves ternate and sessile, and leaflets obovate-cuneate. The root is said to be an excellent astringent, and has been used in the form of decoction for diarrhoea, dysentery, and piles. Another old English remedy, also used in the form of a decoction, is the cowslip, *Primula veris*, L., which was used as an anodyne, and who that has lived in the country does not remember the cowslip wine of our grandmothers? In some of our woods may be found a pretty little plant with white flowers, and whorls of 6–9 lanceolate leaves round the stem, the flowers smelling like heliotrope; this is the sweet woodruffe, *Asperula odorata*, L., belonging to the N. O. Rubiaceae, and formerly used as a cordial and stomachic, and in affections of the liver. The orchids now in flower are *Orchis mascula*, L., the male orchis; *Orchis Moris*, L., the green-winged orchis; and, in the South of England, *Orchis Simia*, Lam., *Orchis purpurea*, Huds., and *Orchis militaris*, L. *Ophrys arachnites* and *Ophrys aranifera*, the spider orchises, may also be found on the chalk downs of Kent and the Isle of Wight. The officinal plants now in flower are *Cytisus Scoparius*, Link., the common broom N. O. Leguminosae, a shrub which may be known by its yellow papilionaceous flowers, ternate or simple leaves, and dark brown pods, hairy at the edges; *Quercus Robur*, L., the common oak, N. O. Cupuliferae, a monœcious tree with short male catkins, and female flower enclosed in a cup-shaped scaly involucre; *Larix europaea*, D. C., the larch, N. O. Coniferae, not indigenous, but common in plantations, may be known by its small clusters of acicular light green leaves and pink female catkins; and lastly, on dry limestone hills, *Juniperus communis*, L., the common juniper, also belonging to the Coniferae, a low shrub with linear subulate leaves in whorls of three, and black berries tinged with blue. For the benefit of students living in Liverpool or the neighbourhood I give localities for the above-mentioned plants. *Scilla nutans*, woods and hedge-banks, very common. *Arum maculatum*, not very common, Prenton Vale Wood, Cheshire, and hedges in the fields about. *Cochlearia danica*, Hilbre

Islands, near West Kirby. *Cochlearia anglica*, Bromborough Pool, Cheshire; by the Birkett, near the Docks station, Hoylake Railway. *Cochlearia officinalis* I have not found, although said to occur frequently. *Cardamine pratensis*, damp meadows, common. *Cardamine hirsuta*, walls and banks. *Cardamine flexuosa*, wet ditches. *Cardamine amara*, in the stream between Croxteth Park and Knowsley Village; also at Deepdale, near Kirkby. *Barbarea vulgaris*, banks of streams. *Barbarea praeox*, cultivated fields. *Sisymbrium Alliaria*, hedge-banks, common. *Pyrus malus*, hedges, Prenton and Bidston, Cheshire. *Prunus Avium*, Bidston Hill, near Bromborough Pool, &c. *Primula veris*, meadows near Hoylake and Meols, &c. *Potentilla Tormentilla*, Oxtou Common, Bidston Hill, &c. *Asperula odorata*, Prenton Vale Wood, Cheshire. *Orchis mascula*, railway bank near Bromborough station. *Orchis Moris*, fields below Wallasey, Cheshire, &c.; and *Cytisus Scoparius*, Grange Hill, above West Kirby, wood past Higher Bebington, Cheshire.

NOTTINGHAM.

RAILWAY RATES.—A meeting of the Nottingham and Notts Chemists' Association was held at the Maypole Hotel on May 8 (Mr. W. H. Parker, vice-president, in the chair), to discuss the proposed alterations in the classification and charges for conveyance of goods sought by the various railway companies under the new Railway and Canal Traffic Act. He contended that if this Act should become law, and the companies were given these extraordinary powers, they, as chemists, would suffer almost more than any other trade, because the proposed classification, &c., affected their goods more in particular, and especially the rating of small packages and empties. Several others present also spoke strongly against the injustice that would ensue on the passing of the Bill as it now stands. A resolution was proposed by Mr. A. Middleton and seconded by Mr. C. Fletcher, and carried unanimously:—"That this meeting protests against the increased maximum rates which various railway companies are seeking to impose under the Railway and Canal Traffic Act (1888); also to the unfair classification proposed for drugs and chemicals packed in hampers, and also for empty packages, which are to be placed in Class V. As claims from chemists for breakage are so very small in comparison with these proposed charges, they consider that this, coupled with the enormously advanced extra rate for small packages, will be a great injustice in the carrying on of their trade. This meeting also desires to accord its fullest approval of the action taken by the Chemical Section of the London Chamber of Commerce in bringing the above and other grievances so ably before the Board of Trade." It was also resolved that the Secretary should send a copy of this resolution to Mr. Francis, London.

SHEFFIELD.

CHANGE OF BUSINESS.—Sheffield chemists seem to be fond of changes, for another has occurred to swell the large number previously announced. In this case it is a well-known business, situate between Glossop Road and Fitzwilliam Street, which, it is rumoured, is for disposal.

EVENING CLASSES for pharmaceutical and medical students, the subjects being chemistry, botany, materia medica, and pharmacy, are being started by Messrs. John Humphrey and Lewis MacLeod, who state that they have secured a convenient chemical laboratory, museum of materia medica, herbarium of medicinal plants, and other aids to practical work.

SHEFFIELD MICROSCOPICAL SOCIETY.—At the last meeting of the session, held on Friday, May 10, Mr. G. T. W. News-holme, F.C.S., read a paper on "Micro-Photography," illustrated with lantern transparencies, shown by the oxyhydrogen light. He afterwards gave a practical demonstration of the preparation of micro-photographs. The paper was listened to with great interest, and at the close a hearty vote of thanks was accorded to the lecturer.

IN MEMORIAM.—Through the death of Mr. W. Jervis, of Broomhill (who died on Friday, May 10), Sheffield chemists lose one who some years back took an active interest in pharmaceutical matters. Mr. Jervis was a prominent member

of the Chemists and Druggists' Trade Association, and was some time president of the Sheffield Pharmaceutical and Chemical Society. He leaves a widow and three children. The funeral took place at the general cemetery on Wednesday, May 10.

IRELAND.

MESSRS. WILLIAM HARRINGTON & SON (LIMITED), of Cork, have just completed very extensive alterations in the retail part of their business premises. The principal effect of this is to separate the dispensing department from the retail counter, and it has been fitted up in excellent style.

KNIGHTS of the pestle and mortar who are partial to football will hear with satisfaction that their distinguished representative, Sir James Haslett, ex-Mayor of Belfast, describes the game as one "calculated to develop two great elements of true manliness—gentleness in bearing, and courage in conflict."

AN enterprising chemist, whose establishment is in close proximity to the South Circular Road, Dublin, urges the general public to increase and multiply their capillary ornaments by a liberal use of his "Clanbrassaline hair-wash," warranted to work wonders for the modest sum of twopence, carriage paid.

At the quarterly meeting of the Belfast Chamber of Commerce, the chairman, the Mayor of Belfast, stated that the Chamber was anxious to have all the trades formed into sub-sections. One of the chief objects of the alliance would be the protection against losses by bad debts. The chemists and druggists' trade has not yet availed itself of the opportunity, but it is probable that in the course of a few days the name will be added to the list.

SCOTLAND.

EDINBURGH.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

—The first botanical excursion took place on Wednesday morning, and a goodly company assembled at the Royal Botanic Gardens, Inverleith Row, at 6 A.M. The place formerly occupied by the beds of medicinal plants has now been entirely altered, and the space laid out with a very complete representation of all the natural orders. These are arranged systematically and very compactly, there being no duplicate specimens, and this promises to be a most valuable collection for botanical students. As yet, however, it was found that the number of specimens in a condition for examination is comparatively small. Despite the somewhat unfavourable conditions, about two hours were spent in a most pleasant and profitable examination of the many interesting specimens to be met with, and it was felt by all that the time was only too short. The next excursion is an evening one to Colinton Dell on May 29, by Caledonian train, at 8.40 P.M.

GLASGOW.

It is reported that Tennant's chemical factory, famed for its high chimney-stack—the second highest in the world—and for being one of the earliest manufactories of chloride of lime in the kingdom, is about to be removed to Airdrie, a town twelve miles from Glasgow, in the heart of the "blaek country."

INVERNESS.

THE SUPPLY OF DRUGS TO THE INFIRMARY.—A short time since the following local druggists, namely, Messrs. Alex. Allan, Henry Mitchell, Wm. J. Bethune, D. MacRitchie, John Fraser, and Wm. Ogston, petitioned the Northern Infirmary Board to be allowed in future to enter into competition with houses in other towns for the supply of drugs, &c., to the infirmary. They would not advance a prior claim, but simply asked for the opportunity to send in estimates. Almost all other supplies, they stated, are obtained from local sources, and they therefore felt aggrieved that all drug supplies should be obtained elsewhere without contract. This petition came before the annual meeting of the managers lately, when the following discussion took place:—

Dean of Guild Munro considered that the local druggists

should get the chance of supplying the drugs. He thought they should retain every penny in the town, and he was sure their own chemists could supply the drugs as cheap as those in the South.

Mr. Anderson said the matter was remitted to the medical gentlemen some time ago, and they reported in favour of the present system.

Dr. Chapman stated that the present system was working very well. It had been continued for five months of the financial year, and a saving had been effected of 12s. 9d. per patient over the whole year. The saving on a complete financial year, they estimated, would be from 80% to 100%. He considered that as trustees of charity funds they were bound to buy in the cheapest market. For years the drugs had been obtained from the local chemists by contract, now they were purchased from a wholesale firm in the South. In reference to Mr. Munro's remark that they should spend their money in the town, he pointed out that they spent a great deal more in the town than was contributed by town's people. In fact, two years ago the druggist's bill alone nearly swallowed up all the church collections. (Laughter)

It was agreed to remit the matter to the house committee.

The statement of Dr. Chapman has called forth a good deal of correspondence in the local press. Messrs. G. Gallo-way & Son, who supplied the drugs without competition for the first thirteen years of the infirmary's existence, but who did not sign the petition, wrote first, saying their highest account for any of those years came to about 130%, and generally ran to about 100%, and the church collections, they added, usually amount to a good deal over 200%. Since the account was put up to competition they had not offered for it, and although the account has since increased largely, they have no doubt those chemists who supplied the institution were quite able to show that the infirmary managers were not "throwing money into their pockets" without getting an adequate return for it.

Mr. D. MacRitchie, who supplied the infirmary from December 1, 1882, till February 28, 1884, for which period of fifteen months his account amounted to 105% 16s. 6d., and he again contracted from August, 1885, to August, 1886, the account for that year reaching 154% 15s. 7d.; but, he says, those accounts included aerated waters, considerable quantities of proprietary medicines, expensive essences of beef, &c., glass bottles, measures, clinical thermometers, and various articles for household and domestic use not coming under the head of medicine or drugs. In one month alone of 1885 thirty-six dozen of aerated waters were supplied.

Mr. John Fraser, who claims to have been the chemist who supplied the infirmary at the time when, according to Dr. Chapman, "the druggist's bill nearly swallowed up the church collections," says that his accounts for the year 1887-8 were for drugs 151%, for surgical dressings 82%. The church collections for 1887 amounted to 481% 9s. 9d. Mr. Fraser properly points out that it is not fair to compare prices of two years ago with those of to-day.

Lastly, Dr. Chapman and a colleague, Dr. Murray, wrote explaining that what had been done was simply to buy from wholesale instead of from retail druggists, and they considered that by doing so the infirmary got the middleman's profit; but Dr. Chapman said he would certainly support the druggists' request to be allowed to tender offers, and would vote for the acceptance of the offer most favourable to all the interests of the institution.

As the outcome of this discussion, it is stated that the house committee has resolved to give the chemists the opportunity of offering for the supply of drugs in the same way as other merchants were invited to offer for supplies to the institution.

PHARMACEUTICAL ETHICS IN BELGIUM.—At the general meeting of the Belgiau Pharmaceutical Association several questions of ethics were presented and discussed. The first was—Are women in the present state of legislation entitled to practise pharmacy? After due deliberation the assembly decided there was no law forbidding them such practice. The second question was—When a pharmacist ceases to be responsible for the management of a pharmacy, should he not within twenty-four hours inform the medical commission of the fact? The reply agreed to was that he should, and steps are to be taken towards the enforcement of such regulation by the authorities.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

A STATUE TO J. B. DUMAS, the chemist, is soon to be erected at Alais (Gard), his native town. Most likely the academies will be represented.

A NOVEL SHOW-BOTTLE FOR LIQUIDS can now be seen in the French pharmaceutical section of the Exhibition. In appearance it is just like the ordinary specie jars with glass covers, used for solid specimens, but in reality it is a regular bottle with a glass stopper, thus allowing a perfect match between the solid and liquid containers.

THE ZOOLOGICAL CONGRESS, to take place this summer, will be held in one of the College of Pharmacy lecture-rooms. The Congress of Therapeutics and Materia Medica would have also been gladly welcomed there, but the committee engaged rooms elsewhere, and, unfortunately for many a pharmacist, the session, August 1-5, will come partly at the same time as the Chemical Congress, which is to be held from July 29 to August 3.

DR. DECHAMBRE'S ENCYCLOPÆDIA COMPLETE.—At the Academy of Sciences' sitting of May 13 Dr. Verneuil announced the completion of the *Dictionnaire Encyclopédique des Sciences Médicales*, formerly edited by Dr. Dechambre, whose death was noticed in THE CHEMIST AND DRUGGIST of January, 1886. This immense work, treating not only of medicine but also of pharmacy and allied sciences, consists of 100 volumes octavo, and is considered the most complete of its kind. Dr. Verneuil remarked, while paying a tribute to the memory of his late fellow Academician, that the Encyclopædia had almost as many subscribers abroad as at home, Great Britain and the United States having taken a considerable number of copies.

THE ANTIQUITY OF BRONZE.—According to an analysis made by Professor Berthelot the sceptre of Pepi I., an Egyptian king of the Sixth Dynasty, consists of almost pure copper. The sceptre in question belongs to the British Museum, and, as a special favour to Minister Waddington, the Museum authorities consented to give a portion of the precious object to be submitted to Professor Berthelot for analysis. Some filings from the inside—the sceptre is hollow—weighing less than $\frac{1}{2}$ grain, or exactly 0.0248 gramme, were detached for examination. The Professor has found them to consist of a reddish metal, slightly oxidised, and a quantitative analysis, correct within one-tenth of a milligramme, has proved the substance to be pure copper, without any admixture of tin, and doubtful traces of lead. His conclusions are that, since archaeologists agree in placing Pepi's reign at about 4,000 years before the Christian era, the introduction of bronze, both in the Old World and in America, occurred very nearly at the same period, and at an epoch not much farther back than fifty or sixty centuries from the present time.

NO OXYGEN IN THE SUN.—The Paris correspondent of the *Daily News* telegraphing on Wednesday states that M. Janssen, of the Academy of Sciences, claims to have made a discovery which upsets the entire theory based on the analysis of celestial bodies by means of the spectroscope. Last Sunday the electric lamps of the Eiffel Tower were turned on the Meudon Observatory, which is 7,800 metres (4 miles 7 furlongs) away. He reckons that the mass of air lying in a given section of that length at the height of the Tower is equal to the atmospheric mass above. M. Janssen argues from this that the number of molecules of air encountered by a beam of light sent from the Eiffel Tower to the Observatory is about the same as that met by sunlight on its way to the earth when the sun is near the zenith. He then shows that if the analogy holds true, the belief that the sun contains oxygen is unfounded, and that if its spectrum contains the characteristic oxygen rays this is due to the oxygen of our atmosphere. One of the fundamental theories of spectrum analysis is that the width of the characteristic bands of a gas is proportionate to the number of molecules that intercept the light. Now in last Sunday's experiment the most important rays of the oxygen group were precisely similar to those of the solar spectrum. The conclusion M. Janssen draws is that there is no oxygen in the sun.

PHARMACY AND CHEMISTRY AT THE EXPOSITION.—At all exhibitions some backwardness is expected, but the present one seems to exceed all expectations in this regard. So glaring has the evil become that M. Berger, the general manager, has issued a circular in reference to the tardiness of French exhibitors, which is all the more noticeable by comparison with their foreign competitors. He threatens to give to other applicants all stands that will not be ready by May 20. The French pharmaceutical and chemical exhibits are no exception to the rule, yet a sufficient number are ready to present an interesting collection, which is all the more convenient to visit that they are all close together in class 45, group 5, of the industrial galleries. Foreign exhibits are more scattered, and in consequence less easy to compass within the limits of one article. On May 12 the following displays were to be noticed in the French section:—MM. Combier, Deschaux & Cie. (Annonay, Ardèche) had a small but tasteful show of glues of various grades up to isinglass. Kestner (Bellevue, Territoire de Belfort), pyroligneous preparations in great number, among which the following may be noted: methylene, pure and impure; heavy and light wood oils; methylic alcohol; pyroligneous acids; acetates, &c. E. Beau (Aglain, Gard), antimony in the metallic state and various combinations. F. Tissier (Le Conquet, Finistère), iodine, crude and refined; iodides; bromides, &c. Poirrier & Dalsace (6 Rue Rougemont, Paris), the aniline dye manufacturers, had a splendid display of their products, which, although somewhat out of the pharmacists' line, were of such gorgeous brilliancy that one could not pass by without admiring them. The Société générale des produits antiseptiques, G. Cerckel, delegate for Paris, present a full assortment of the new antiseptics, such as salol, terpinol; salicylic acid; methyl, ethyl, mercury, and other salicylates; benzoates, &c. Rondel frères & Genestout (Bordeaux) have a full and attractive display of pharmaceuticals, including dry extracts of cinchona, nux vomica, ipecac., opium, quebracho, and bitter orange peel, all very light coloured and natural looking; the orange-peel extract, for instance, is almost as green as pyrophosphate of iron scales. Samson & Millaud fils (Marseilles), blood albumen, blood crystals, and dried blood. Unfortunately a large jar labelled "Sang liquide conservé" is yet empty, and thus the collection lacks what will certainly be the most important attraction, namely, liquid blood kept unaltered in summer. But perhaps it is only a Marseilles joke. The Solvay Soda Company have a few specimens, interesting in their way. The main exhibit, however, is in a separate pavilion elsewhere, near the Avenue Labourdonnais. Poulain & Cie. (14 Rue Payenne, Paris) make a good exhibit of materia medica specimens. Their quassia, sassafras, and sandal wood shavings are almost as lovely as the curls of a school-girl. Adolphe Roques (Paris), chemicals, among which are camphor, camphoric acid, camphorates, iodine, iodides, and bromides. La Compagnie d'Hydroleine (Tourcoing, Nord) display a good many articles for the laundry with English labels. Etablissements Maletta, acids, nickel and cobalt salts, azew salts, &c. The St. Gobain Plate-glass Company, for which chemicals are but a "side speculation," show various acids, sulphur recovered from soda waste, and selenium in plates manifesting the striking and mirror-like brilliancy characteristic of the element. Billaut (Paris), Coignet & Cie., and Poulenc Frères had their exhibits nearly ready, but not quite so. Adolphe Kaulek (Puteaux), E. Dubosc (Paris), and Pommier & Cie. (Paris), dye-wood extracts and chemicals. Darrasse Frères and Landrin present under the dome a very fine display of crude drugs and pharmaceutical products; their dry extracts of cinchona, ipecac., bitter orange-peel, and medicinal capsules deserve especial notice. Taillandier (Argenteuil, Seine-et-Oise), quinine, cinchonine, quinidine, and their salts. Chassaing & Cie. (6 Avenue Victoria, Paris), pepsine, pancreatine, peptone, and preparations. Perhaps it would be unjust not to say a word of the Marseilles soapmakers, since the article is official in many Pharmacopœias, and the manufacturers' display is far from unattractive. The following may be mentioned:—Arnavon, Charles Morel, Ch. Roux, Fils, and Baron Fils. And finally, perhaps the most interesting exhibit, among all then complete, was that by Charles Hoffman (Paris), consisting exclusively of cinchona barks. But they are there in such variety, Java, Bolivia, Madras, Calisaya, mossed barks, flat plates, small quills, &c., and some of such size—3 to 5 feet long—and striking appear-

ance, that it is impossible to pass by without stopping to have a look at them. No doubt many other very good exhibits are still to come, as the empty cases indicate, but there is scarcely any excuse for such backwardness, as the gallery was completed in good time.

GERMAN PHARMACEUTICAL NEWS.

(From our Berlin Correspondent.)

ICE IN THE PHARMACY.—Why should not a chemist be compelled to keep ice in stock? was the question raised at a meeting the other day of a prominent medical society. There are many other products, not half so useful nor so frequently required, to be found in the Pharmacopœia, and, as one speaker remarked, it is not pleasant for the patient, when he needs ice, to have to go begging for it to the butcher or the confectioner, the only two tradesmen who always keep a store. It was decided to bring the matter before the authorities, so as to have the "remedy" made official.

THE INHALATION OF MENTHOL has been recommended of late as a remedy for asthma, having been found useful in all attacks where it was given, and seems worthy of more extended trials. A 20-per-cent. solution in olive oil was used.

THE "APOTHEKE" TAX.—As is well known, when chemists' businesses are sold here very high prices are often obtained, the business of the Simon's "Apotheke," of this city, fetching no less than 60,000*l.* at a recent sale. A peculiar legal point has been raised over this transaction. Our finance officials, like Pitti Sing in the "Mikado," are very wide awake, and, whenever a business changes hands, they come down on the seller for a substantial contribution to the revenue. This tax, which is as popular here as the tithe is in England, has hitherto been levied upon the value of the house and furniture only. In the case cited above the value of these was set down at 22,500*l.*, the goodwill being estimated as worth 37,500*l.* The officials thought their share much too low, so the matter was fought out in the courts, with the result that, after many appeals, the Imperial Court of Justice has decided that the whole of the purchase-money has to bear the tax, a most unpalatable decision to the trade.

CHLOROFORM FOR INTERNAL ADMINISTRATION.—We have hitherto looked on chloroform only as an anæsthetic and external remedy, but of late it has been prescribed for internal administration in a number of diseases. German dispensers, who at present regard its prescription internally with some anxiety, will, no doubt, soon become as familiar with it so applied as are their English brethren.

THE RESTRICTIONS AGAINST ADVERTISING patent medicines in newspapers and magazines are being made more severe. The Berlin police some time since prohibited the advertisement of any patent medicine in the papers and periodicals printed in that city, and are trying to extend the prohibition to similar media published outside on the ground that they are read in the capital, being either sold openly or sent by post. The *Cologne Gazette* has been summoned for infringing this decree, and has been fined 10*s.*, but, having appealed, the matter will be threshed out in the higher courts.

CHEMISTS' SHOPS in the principal German cities are gradually assuming a very different aspect to their former appearance. It is impossible to carry on a pharmacy here unless one has a very keen eye to the main chance, as profits must be fairly large to yield even a moderate return on the purchase-money. This has caused an increased trade in special articles for use by medical men, *e.g.* surgical dressings, instruments, pocket-cases, &c., thus bringing our pharmacies more into resemblance with those of England. The number of new remedies brings much more trade, but is not without its trials, as the chemist is expected to know the therapeutic effect of each product, and to be able to furnish full information to the medical man. These new features are altering the whole style of business, and will probably effect still greater changes in the near future.

TREATMENT OF FROSTBITES.—Unna has lately published some interesting comments on various remedies for frostbites. He divides them into two classes. The first embraces such bodies as *ol. terebinth.*, iodine, capsicum, *tr. cantharidis*, camphor, acetic acid, citric acid, and nitric acid. The second contains alcohol, tannin, *ichthyol*, collodion, storax, Peruvian balsam, and zinc ointment. He finds that a combination of the two classes acts the best, and recommends *tr. iodi* and *tr. gallæ*, tannin and *sp. camphoræ*, *ol. terebinth.* and *ichthyol*, collodion and *ol. terebinth.* The old-fashioned friars' balsam also meets with his approval.

THE PREVENTION OF ACCIDENTS.—An exhibition of means designed for the prevention of accidents is just now open in Berlin. The object of the exhibition is to form a collection of all such measures as are actually undertaken or proposed for the prevention of accidents in factories and other industrial establishments. It would not be practicable for *THE CHEMIST AND DRUGGIST* to give a detailed report on each of the twenty-two departments which the exhibition contains. But the eighth, tenth, and sixteenth sections, which deal with the prevention of accidents caused by poisonous and caustic substances or obnoxious gases, should be of some interest to its readers. There is a very fine exhibit by the authorities of the Hygienic Museum of Berlin. This collection contains a number of specimens of the anthrax and tubercle bacilli, by the side of which are placed samples of dust taken from different factories, and containing precisely the same justly-dreaded micro-organisms. As each specimen is shown under a microscope the public are able to become somewhat familiar with a most important chapter of human pathology. In the same department we find a number of new instruments exhibited by Dr. Robert Muencke, of Berlin, the most interesting of which are an apparatus for examining the bacteria contained in the air, and a very neat autoclav for sterilising, both of which are constructed by Dr. Petri, the chief of the Hygienic Museum.

Messrs. Rietschel & Henneberg, of Berlin, exhibit apparatus for sterilisation of all kinds of dressing material. Sterilisation is effected by a constant stream of water vapour. The instruments for sterilisation of medicaments are constructed on a similar principle, and exhibited by the same firm. In an adjoining room there is a remarkable collection of products, sterilised by such apparatus, prepared by the firm of Max Kahnmann, of Berlin. Their different dressings have specially attracted our attention. As they are sterilised after packing, any incidental infection is quite excluded. The illustration represents (natural size) a small glass tube suitable for carrying antiseptic silk, catgut, or other stitching material, in an antiseptic medium. In the same collection there are some convenient dressing-boxes, which have been constructed for the friendly associations of working men. The latter institutions are a fruit of the modern German social politics. Similar highly-finished dressing-boxes are exhibited by Ed. Capelle, of Berlin; Warmbrunn, Quilitz & Co., of Berlin; Moritz Böhme, of Berlin; Austria, of Vienna; Delacre, of Brussels; and Paul Hartmann, of Heidenheim. The latter firm is represented by sterilised preparations of wood-wool, a dressing material which has of late found much favour in surgical practice.

The well-known chemist firms of F. Lütze and S. Radlauer, of Berlin, are represented by carbolic acid and corrosive sublimate pastilles. A. Tod, of Bremen, who for many years supplied the steamers of the North German Lloyd with medicine-chests, has contributed to the exhibition a number of articles, which combine elegant execution with practical usefulness.

The firm of Benno Jaffé & Darmstädter exhibit a lanoline ointment for burns and wounds, prepared from lanoline and paraffinum liquidum. This ointment has come much into use in the large German industrial establishments for the treatment of burns, scalds, and wounds.



Hugo Ecke, of Berlin, introduces hermetically-closed bottles, called "Æsculaps," to be opened by a special key, intended for keeping acids and poisonous substances. At present no larger sizes than 16-oz. bottles have been manufactured.

Julius Wolff, of Gross-Geran, exhibits a free-air inhaler, the use of which may be judged by the adjoined illustrations.



By a long tube made of parchment paper the patient communicates from his room with the open air. One end of the tube is passed through the window, and the other is furnished with two little open horns fitted with valves, which are placed in the nostrils and held there while in use. It must be said that the long tapeworm-like tube does not look very elegant, and it remains to be seen whether its use is of any importance in the treatment of phthisis. Originality and German cheapness cannot be denied to this invention.

The articles exhibited prove what importance is in Germany attached to all measures tending to improve the social conditions of the labouring classes. Several large chemical and other companies exhibit models showing the installations and works of their firms, indicating particularly the means for preventing evaporation of poisonous gases from stoves and apparatus, &c.

AUSTRALIAN NEWS.

THE ANNUAL MEETINGS of the Victorian and of the New South Wales Pharmaceutical Societies were held in March, and neither was a model of propriety. The President of the Victorian Society (Mr. Huntsman) was rather severely pressed by Mr. C. R. Blackett, Jun., and Mr. Cormaldi as to changes in the teaching staff of the society. The President refused to answer questions; said he would manage the meeting his own way while he was chairman; and if anyone was dissatisfied with the present management his proper course was to vote for a new council. The President seems to have received the support of the meeting. The Sydney meeting, which was held on March 12, was a very unsatisfactory affair. When the members assembled they found the council wrangling among themselves as to the report, which, it appeared, had been drawn up by the secretary, but had never been submitted to the council. No balance-sheet at all was forthcoming. The late treasurer had removed to Wagga, and, though he had been trying to get his financial statement for 1888 ready for this meeting, he had been unable to do so because his figures refused to balance. Then came nominations for six vacancies on the council. Twelve gentlemen were proposed, but this being done it was asked whether notice of the nominations should not be given, and it was found that this was necessary according to by-law. Ultimately the meeting was adjourned for a month, and even that course, it was contended by some present, was unconstitutional. Anyway, during the interval the society is left without any representative body which can act on its behalf.

THE PROTECTIVE TARIFF IN SOUTH AUSTRALIA.—"It's thorough humbug" was the response made by Mr. Scammell (of Faulding & Co.) to a question put by a reporter as to the operation of the tariff. "Whilst a very heavy duty has been imposed upon the spirit for the purpose of compelling the manufacture of perfumes in the province, and a heavy tax has been imposed on scented soap with a view of compelling its manufacture here, too, the almost prohibitive duty of 27½ per cent. is levied upon all raw materials which are used for the production of both perfumes and perfumed soap." Mr. Scammell also instanced in other ways the strange application of the duties, remarking that on a recent occasion they had to pay, in addition to carriage, 5s duty on an air-

pillow, costing in Melbourne 12s., the article in question being classed as *furniture*. The manager of the Adelaide Chemical Works, Mr. R. B. Cumming, rather favours the present tariff, but complains of acetate of soda being taxed, as they use it in making acetic acid. The acetate of soda used comes from France. Mr. G. Henrichson, manager of the South Australian Glass Bottle Factory, will be satisfied with an additional 5-per-cent. duty on imported bottles. Like Protectionists everywhere, the South Australian manufacturers think a perfect tariff would be complete protection for the goods they make, and freedom of sale for the goods they buy.

THE PHARMACEUTICAL REGISTER OF VICTORIA for the current year shows, on examination, that the following are the qualifications of the persons registered:—

In business in Victoria before October 1, 1876	..	..	470
" before October 1, 1876	..	..	8
" in New Zealand before October, 1877	..	..	1
" " New South Wales before October, 1876	..	..	1
" " Great Britain before August 1, 1858	..	..	9
Major examination, Victoria	..	..	71
Modified examination, Victoria	..	..	77
Great Britain, Major	..	..	21
" " Minor	..	..	43
" " Modified	..	..	6
" " "	..	..	8
Pharmaceutical Society of Ireland	..	..	3
University of Leipzig	..	..	2
" " Vienna	..	..	1
" " Copenhagen	..	..	1
Board of Pharmacy, Mauritius	..	..	1
Restock College of Pharmacy, Germany	..	..	1
Hanoverian College of Pharmacy	..	..	1

As regards the place of residence we find the following figures:—

Victoria	..	..	..	653	Fiji	..	..	..	4
New South Wales	..	..	..	44	South Australia	..	..	..	3
Tasmania	..	..	..	14	England	..	..	..	3
Queensland	..	..	..	5	United States	..	..	..	1
New Zealand	..	..	..	4	Western Australia	..	..	..	1

KEMP THORNE, PROSSER & Co.'s NEW ZEALAND DRUG COMPANY.—The tenth annual meeting of this company was held at Dunedin on March 14. The company has a paid-up capital of 84,574*l.*, with 8,400*l.* in debentures. The stock was valued at 86,833*l.* 3*s.* 10*d.* net, and the premises and plant, after allowing for depreciation, at 24,078*l.* 1*s.* 1*d.* Their gross profit for the year was 27,519*l.* 9*s.* 11*d.*, from which had to be deducted 16,882*l.* 5*s.* 5*d.* for salaries and general expenses, 1,703*l.* 3*s.* 3*d.* for bad debts, and 300*l.* 10*s.* 5*d.* for property-tax and licence fees; leaving a net profit of 8,633*l.* 10*s.* 10*d.* A dividend of 7 per cent. was declared. In the course of his speech the chairman, Mr. B. Sievwright, said that when the new tariff was passed they had an existing contract with the patentees of saccharin to take certain quantities within a given time for New Zealand, and this contract had only partially expired when the Government, under their new tariff, imposed a duty of 5*s.* per oz. on this article, thus completely destroying the sale. They had spent large sums in advertising the article, and had now large stocks in bond, which they could not take out, nor could they re-export it because their contract limited their sale to New Zealand. The reason given by the Government for this extraordinary duty was that it was necessary to protect the revenue derived from sugar. The subject had been brought under the notice of the Premier, who had admitted they had an equitable claim. As the matter stood, unless they get compensation for the injury done, they must lose something like 1,000*l.*

A TESTIMONIAL TO MR. BOSISTO is being organised by a committee in the district of Richmond, which that gentleman formerly represented in the Legislature. It is considered that his public services entitle him to the gratitude of the whole colony.

MORE BAD LUCK.—Mr. Winks (looking over his morning paper): "Cheap, Drugg & Co. are selling all sorts of patent medicines at half-price." Mrs. Winks: "Just our luck. There isn't anything the matter with any of us."

Pharmaceutical Society of Great Britain.

ANNUAL DINNER.

THE annual gathering this year commenced with the dinner of the members of the Society and their friends, which was held in the Freemasons' Tavern on Tuesday evening. The hour of meeting was 6.30 p.m., and dinner was on the table by 7 o'clock. At that hour the company numbered over 200, and included the following guests:—Sir Frederick Abel (Secretary Imperial Institute), Dr. James Bell (President Institute of Chemistry), Dr. T. Buzzard (President Harveian Society), W. Carruthers (President Linnean Society), Sir Andrew Clark, Bart. (President Royal College of Physicians), Dr. W. H. Dickinson (President Pathological Society), Dr. Farquharson, M.P., Professor Michael Foster (Secretary Royal Society), Dr. A. L. Galabin (President Obstetrical Society), Christopher Heath (President Clinical Society), Sir Hunter Guyer, M.P., Sir Trevor Lawrence, Bart., M.P., Professor John Marshall (President General Medical Council), Ludwig Mond (President Society of Chemical Industry), G. Peters (Mayor of Windsor), Sir Tindal Robertson, M.P., Dr. W. H. Russell (President Chemical Society), T. Skeel (Master Society of Apothecaries), Dr. T. Stevenson, Professor Stokes, M.P. (President Royal Society), Dr. C. T. Williams (President Medical Society of London), H. Trueman Wood (Secretary Society of Arts). Mr. Michael Carteighe, President of the Society, occupied the chair, Sir Trevor Lawrence sitting on his right, and Sir Andrew Clark on the left. The seven spur tables were presided over by members of the committee, viz.:—The Vice-President, the Treasurer, Charles B. Allen, Isaiah Bourdas, Dr. Paul, A. H. Mason, and John T. Tupholme. The stewards present were:—

Allen, C. B.
 Arkinstall, W.
 Atkins, S. R.
 Attfield, Professor
 Barnes, J. B.
 Bascombe, F.
 Bird, Augustus
 Blake, C. A.
 Broad, J. M.
 Burroughs, S. M.
 Butt, E. N.
 Collier, Henry
 Constance, E.
 Cooper, A.
 Cross, W. G.
 Davies, R. H.
 Down, Dr. J. Langdon
 Dunstan, Professor
 Dymond, T. S.
 Ekin, Charles
 Farries, T.
 Flux, C. W. L.
 Francis, G. Bult
 Francis, W. H.
 Gale, Samuel
 Gerrard, A. W.
 Gilmour, W. (Chairman of
 Executive, North British
 Branch)
 Gostling, T. P.
 Green, Professor
 Greenish, T.
 Greenish, T. E.
 Hampson, R.
 Herring, W. C.
 Hills, Walter
 Holmes, E. M.
 Hovenden, R.
 Hugill, J.

Huskisson, H. O.
 Ince, Joseph
 Lansdown, G.
 Lorimer, J.
 Martin, N. H.
 Martindale, W.
 Morson, T. P.
 Moss, John
 Naylor, W. A. H.
 Nesbit, John
 Newsholme, G. T. W.
 Passmore, F.
 Plowman, S.
 Preston, A. C.
 Ransom, F.
 Richardson, J. G. F.
 Royle, H. W. (Ingram &
 Royle)
 Sanger, C.
 Saul, J. E.
 Savory, A. L.
 Savory, J. F.
 Schacht, G. F.
 Squire, P. W.
 Stamp, E. B.
 Symons, W. H.
 Tanner, A. E.
 Taylor, G. S.
 Thomas, H. A.
 Thompson, H. A.
 Tupholme, J. T.
 Umney, Charles
 Warren, W.
 Warrick, F. W.
 Wills, G. S. V.
 Wink, J. A.
 Woodland, J.
 Wootton, A. C.

The company also included the following gentlemen:—J. Allden, H. G. Attwood, W. H. Baines, A. Baiss, R. Banister (of Somerset House Laboratories), W. G. Blackham, G. S. Boutall, J. W. Bowen, W. J. Bowles, J. P. Boyce, R. Bremridge (Secretary), R. W. Carter (S. Maw, Son &

Thompson), H. J. Chaney, A. J. Chater, S. W. Constance, A. J. Cownley, C. J. Fox, A. E. Garner (W. Best & Co.), J. Garner, W. Glenister, W. Goldsworthy, Corney Grain, H. G. Greenish, W. F. Gulliver, W. Hatch, W. Harvey, T. Hawkins, H. Helbing, E. Hill, G. E. Jones, Peter MacEwan, J. Maish, A. Mann, J. D. Marshall, C. Martin, T. C. W. Martin, H. Mathews, J. K. Matterson, A. C. Mcyjes, G. Mee, E. J. Millard (President Chemists' Assistants' Association), H. H. Millhouse, H. Moon, F. Moul, J. Murison, P. Ockenden (Rocke, Tomsitt & Co.), S. W. Ord, A. J. Phillips, Major Phillips, S. Potter, A. Pulford, W. I. Richardson, G. Robertson, W. J. Rogerson, T. O. Sandell, D. Smith, A. C. Stark, J. B. Stephenson, C. Stevens, C. J. Strother, R. Taubman, D. Thomas, A. Webber, T. J. Whiffen, W. G. Whiffen, A. Williams, J. Wilson, W. F. Wyley, James R. Young, Jun. *The Times* and the *Standard* were also represented at the meeting.

Dinner over, "The Queen" was honoured in a brief speech from the President, and a hearty response from the company. Then Mr. Corney Grain had matters in his own hands for ten minutes or so, evidently to the great enjoyment of everybody.

"THE HOUSES OF PARLIAMENT."

This was the next toast. Mr. CARTEIGHE gave it in a commendably brief speech. We could all drink loyally to the House of Peers, he said, for every citizen of this country must be conscious of the glorious past of that division of Parliament, as they were also proud of the House of Commons. He associated with the toast the names of Dr. Farquharson and Sir Guyer Hunter, both distinguished as members of the House of Commons, and as educated men in medicine, they had been able to assist the legislature in the promotion of educational and scientific measures by opinions which were based upon sound experience. He trusted that the country would be able to send many more such men to Parliament. (Hear, hear.)

Dr. FARQUHARSON said, in reply, that he was glad to speak for the 450 gentlemen who constituted the House of Lords and the 660 who formed the Commons. He flattered his audience by telling them that though the Houses were distinct, they were united in being represented at the dinner. The Lords were in the position of having little to do, while the Commons had too much; yet the latter contained so many able and patriotic men that he would hope for them that they would yet, in a greater amount of accomplished work, be able to give the country the benefit of their powers. He confessed that with the memory of a defunct Pharmacy Bill on his mind, he was ashamed to appear before the members of the Pharmaceutical Society; but the fact was that there was great difficulty in getting measures of that kind through the House, especially if any private member chose to say that he did not agree with it. That was just the position they were in, but he hoped that Sir H. Roscoe and the others who had charge of the Bill would some day succeed in safely piloting it through the House of Commons.

Sir GUYER HUNTER followed, remarking at the outset that he did not think it necessary to say much after Dr. Farquharson's elaborate speech. Nevertheless, we had another dose of the House of Commons and the House of Lords, given in the ponderous style which characterises the after-dinner speaker from Westminster. The speaker sparkled into wit when he took the company into his confidence, telling them—with a sly look at Dr. Farquharson—that it was the Local Government Bill for Scotland which was blocking the way, and only when they succeeded in satisfying the Scot would they get the Pharmacy Bill through. Just here the bulk of the audience began to rival Sir Guyer in the exercise of their vocal organs, and they subsided at the call of the toast-master in time to hear the member for the central division of Hackney promise a Local Government Bill for Ireland, as some relief from the consequences of the Coercion Act. For a minute or so after this each one indulged in a loud manifestation of his political sentiments, whatever they might be.

"THE MEDICAL PROFESSION."

This is a toast which always falls to the Vice-President, and Mr. Bottle, rising, submitted it for hearty acceptance. The medical profession, he said, was entirely humanitarian, noble, self-denying, and so on. As pharmacists they could honour it, and as fellow-men they would acknowledge its

labours to humanity in infancy, manhood, and accident; in the palaces of the rich and the houses of the poor. "Hear, hear," came from the audience, and attention increased as Mr. Bottle proceeded to unfold several exceptionally choice phrases. If medicine is not an exact science, said he, it is an advancing art. In the old days of medical practice which he could recall—the days of the leech and the blister—there was often a counter-irritation produced which the medical man did not aim at. (Laughter.) He claimed for advanced pharmacy a share in the alleviation of human suffering, for which pharmacists felt themselves amply satisfied if they had the knowledge that they had done a little towards that noble object.

Sir ANDREW CLARK, in responding, said that it was a very happy thing to find a body of men all working in the cause of humanity, united by close ties of amity, good feeling, confidence, and respect. Both sides of the profession were represented there that night. The one which they were connected with entailed very important work, while the task laid upon that branch of the profession which he represented was a very arduous one, fraught always with possibilities of error, and demanding all sympathy and forbearance, and he was only too glad to recognise the assistance which he received from members of the Pharmaceutical Society. No one who, like himself, believed that there was something more in the universe than was to be seen, that there was a capability of higher life in man, could fail to rise from such contemplation without feeling a better and a wiser man. ("Hear, hear.") Speaking as one who knew both pharmacy and the world, he ventured to say that the Pharmaceutical Society had gained the respect of Englishmen. There was a risk that in the race for wealth and luxury they might lose their honour and regard for accuracy, and this had become so marked in English trading that in one of the leading houses of Shanghai they put up a notice, "Beware of Englishmen, they are cheats." That was the biggest thing that could be said against them; but he trusted that the medical profession would so do its work that it might be said, "To be an Englishman was to be a good man, and to do their work was to do a good work." (Applause.)

Professor JOHN MARSHALL also responded, speaking of the Society as being most successful, wealthy, and having done much for the promotion of exact pharmacy and maintaining the purity of drugs by scattering throughout the country 5,000 of its members, each of whom was doing it credit. He commended the Society for what it was doing in regard to educational matters, recognising that both in its past services and present activity. The advancement of pharmacy had a direct relation to the practice of medicine, and each department was now becoming so important in itself that the days of the old-fashioned system of prescribing and dispensing on one man principle were numbered, and ere long, he hoped, physicians would stick to their legitimate duty, and pharmacists would do the dispensing of their prescriptions. (Hear, hear.)

"THE LEARNED AND SCIENTIFIC SOCIETIES."

Mr. CARTEIGHE, in submitting this toast, spoke only a few sentences, the gist of which was that there were representatives of all then present, and he coupled with it the names of Professor Stokes, F.R.S., and Mr. William Crookes, a newly elected honorary member of the Pharmaceutical Society, who had been placed on the list not only because he was the discoverer of thallium, but as a philosopher who had done great work in a department of physical science which they as pharmacists were not able to tackle, but could appreciate.

Professor STOKES said, in reply, that scientific societies were nowadays like an old couple with a numerous family, the members of which went out into the world and were scattered. The Royal Society was the old couple of science, and its offspring in various departments had that same filial regard and affection for the old home that the members of a family had. Proceeding, he enlarged upon this point, and he offered the company some thoughtful ideas regarding the study of the electric spark, especially of that portion of it which is invisible to the human eye. These also were things which the members of the Society then present "could not tackle"; the faces showed it; and conversation made it doubly certain, so Professor Stokes gave place to

Mr. CROOKES: He was obliged to the Society, he said, for making him a member without asking him to go through the ordinary examinations. Otherwise, he feared, he would not have been a member. (Laughter.) In this election he saw an illustration of the triad union of the sciences—of pure chemistry and of physiology and medicine (in that accomplished man Professor Burdon Sanderson) meeting pharmacy—just as in olden times pharmacy combined chemistry and medicine. In its newer aspect pharmacy was doing splendid work. In dyeing and calico-printing, as well as other industries, it had had a share in modern advances, but it was in medicine that it had particularly exhibited its power for usefulness—extracting the active principles from crude drugs and producing artificial compounds, such as antipyrin, antifebrin, and salicylic acid, which were of rare value in medicine. He was pleased to note that the Pharmaceutical Society had recently made a new departure by instituting a research laboratory. Amongst other things which this would accomplish he could see one of first importance—viz., that in the future physicians would be able to apply to pharmacists for substances which would act in a definite manner in the treatment of disease, and the old and empiric remedies would disappear. He wished not only to express the hope that the laboratory would accomplish all that the most ardent could desire, but also to thank the members of the Society for the honour which they had done him.

A BUMPER TOAST.

This was what the toast-master called for in announcing the next on the list, "The Pharmaceutical Society of Great Britain, and the Health of the President." Sir Trevor Lawrence gave it. In rising he said that the toast carried him back thirty-five years, when he was a pupil in the laboratory of John Bell & Co., and he recalled with pride the fact that his certificate was signed by Thomas Hyde Hills, the most kind, most generous, and most unselfish of men. (Applause.) After referring to the work which Jacob Bell and Mr. Hyde Hills had done for the Society, Sir Trevor contrasted the condition of pharmacy now with what it was before it was founded, and maintained that it had rendered excellent service to the medical profession. Speaking of the chairman, he said he was a fine fellow, and the landlord of Corney Grain. He added, if Mr. Carteighe had not the qualifications for the position he occupied he would not have held it for seven years. (Hear, hear.)

The toast was received with musical honours.

The CHAIRMAN, in rising to reply, was received with hearty cheers. His friend on the left, Sir Andrew Clark, he said, had just made the remark that this must be an annual meeting. Unfortunately it was not, that came on the morrow, and he hoped that those who were to scarify him then would not forget that night. There were present there representatives of the various branches of the Society—Mr. Gilmour, the chairman of the Executive of the North British Branch, and his colleagues, Mr. J. B. Stephenson and Mr. Nesbit, as well as a number of local secretaries from various parts of the country, and he wished to say how glad the Council were that they had been able to attend. Having done with the preliminaries of his speech Mr. Carteighe dived into the never-failing subject—the relations of the Society with the trade. The Society, he remarked, does not exist for the protection of trade interests if those interests were not analogous with the interests of the public, and, so long as he was connected with the Society, so long would he protest against such a prostitution of his functions. He would not dare to go to Parliament for anything which would not be for the benefit of the public and themselves—he would not dare to go to the Houses of Parliament and ask for a Bill drawn up in the interests of the trade. The gratifying thing to him was that whenever he came into contact with local secretaries he found that their opinions agreed on general lines with that principle. The new divisional secretaries for London (whose number, recent appointment, duties, and the meeting with them he detailed at length, but too long for these columns) had also assured him that the Society was on the proper track in this matter of trade interests. All this talk which had been going on for years, and more vigorously of late, was really due to ignorance of the powers of the Pharmaceutical Council. He appealed to his friends the members of Parliament sitting beside him to sup-

port him in his assertion that there was no use trying to get any Bill proteeting trade interests through the House of Commons. Next the President spoke of himself, and in his best fighting style defended himself from the attack by the anti-vivisectionists. Next year, he said, he might have to give way to another—(No, no)—for they had undertaken original research on a definite principle, and at the very threshold of the scheme another body came in and protested. He did not object to fair criticism, but when that other body said that Mr. Carteighe should be got rid of, and endeavoured to do that by a side wind, he said that that was not right. He did think that, after giving for a period of seven years all his leisure and much of his business time to the work of the Society, it was exceedingly unfair that twenty-eight members of the Society should associate themselves together under the patronage of another society to get rid of those on the Council with whom they did not agree. He only referred to this matter in order to supplement the remarks of Sir Andrew Clark, and to urge that if they were going to fight they should fight fairly. This protest against the Anti-Vivisection Society was delivered with great warmth, and for some minutes Mr. Carteighe had his audience quite with him. Just before sitting down he neatly capped the remarks with some platitudes in regard to the honour done to him personally by the presence of so many distinguished guests that night, and appealed to the members to support him on the morrow.

THE GUESTS

were the subject of the next toast, which was given by the CHAIRMAN. He travelled over some of the old ground, speaking of the country members of the Society who were present, and associated with the toast the names of Sir Tindall Robertson, Sir F. Abel, and the Mayor of Windsor.

Sir T. ROBERTSON was the first to reply, and his speech was made up of political references mainly, but it was excellent on the whole, and was well received, especially that bit in which he said that the Pharmaceutical Society's plan of campaign seemed to be a plan of champagne. He considered it unfair and improper that the Pharmacy Bill should be stopped in the House of Commons by a plethora of talk. It was a good Bill, he considered; for it was a splendid thing to educate the juniors, and while it was advancing pharmacy it was for the good of the public.

Sir FREDERICK ABEL'S topic was Mr. Carteighe, about whom and the Society over which he presides he had something good to say in a charming manner; and then the MAYOR OF WINDSOR had a few words of thanks to add, after which the meeting spontaneously broke up. It was, on the whole, a success, and what helped to make it so was

THE GOOD THINGS PROVIDED.

Those who were not there may be interested to know what they were, so we reproduce the *carte*, and may add that Mr. Corney Grain gave three sketches altogether much to the enjoyment of the company.

Menu.

Clear Turtle.	Crème de Volaille.	Asperges Frappées.
Salmon, Sauce Mousselin.		Gâteau Breton. Gelée aux Abricots.
Cucumber.	New Potatoes.	Bavarois Vanille.
	Whitebait.	Parfait Glacé.
	Poulet à la Chevalière.	Dessert. Coffee.
	Chaud-froid de Foie Gras.	
	Saddle of Mutton.	Wines: Manzanilla; Hochheimer,
Beans.	Potatoes Rissolées.	Vintage 1874; Deutz and Geldermann,
York Ham and Madeira Sauce.		Vintage 1884; Moët and Chandon, Brut Imperial.
Gosling. Peas. Salad.		Dessert wines: Châteauneuf-Larose
		Sargat, Vintage 1879; Royal Port.

FORTY-EIGHTH ANNUAL MEETING.

THE front part of the Bloomsbury Theatre was fairly full at midday on Wednesday, but the attendance was not equal to that of some previous years. The Council filed in to their seats at ten minutes after the appointed hour, Messrs. Evans, Nichol, Savage, Southall, and Watt failing to show up. A very marked cheer was given to the President (Mr. Carteighe) as he took the chair, this being led off by some members of the Council. He at once proceeded to business, calling upon the secretary to read the notice convening the meeting,

and then he moved that the annual report and financial statement be taken as read. This was agreed to. Commencing in

A SOMEWHAT SUBDUED TONE,

Mr. CARTEIGHE took up the annual report paragraph by paragraph, first taking the financial statement, which he summarised in a few words, pointing out where there had been a falling off and where a gain in receipts. Members, for example, yielded 100% or so less, while the *Journal* brought more in for advertisements, and the examinations in fees. The membership matter was, he considered, an affair to be sorry for, not only on account of the money, but for the loss of the individuals. Times are hard, he knew, and some of the members were perhaps right in thinking twice before paying their guinea when the subscription became due, but he would ask them as business men, was it wise to leave the only organisation in connection with the trade at a time when they most needed help? (Hear, hear.) Every member of the trade, he contended, ought to be part and parcel of the Society, if they wished to help it on. (Hear, hear.) He did not wish to go into the sale of stocks for the purpose of meeting the expense incurred by the new buildings; the long and short of the matter was that, exclusive of that portion of the statement, it showed a deficit of 100%, which he said was due to the expense of fitting up the new chemical laboratory and dispensary for examination purposes. It was a charge which would not come on again; it would result in a saving of time to the examiners, and more comfort to the candidates. A somewhat similar expense had been incurred in Edinburgh. In addition to that they had also paid for chairs and tables for the Galen Place house, and had published a new catalogue, so that altogether the charges under these headings came to 400% or 500%, and they had been paid from current account. The Benevolent Fund was the next theme, and Mr. Carteighe travelled over its whole history pretty nearly, explaining where the money comes from and where it goes, advocating warmly greater liberality on the part of the trade. The policy of giving more annuities than there is interest from invested capital to cover was succinctly put to the meeting, and in such a way that there was little trouble in getting the members to agree with it, but where Mr. Carteighe scored best at this part of his fifty minutes' speech was in

ADVOCATING THE CAUSE OF THE WIDOWS.

Thirty pounds or 35% a year was, he considered, too paltry a sum to give the widow of a chemist and druggist. It was a mere pittance, which could not support a family entirely, and would not relieve them from want. He would like to see annuities of at least 50%. "Will you by increasing your subscriptions, or by liberal donations, enable us to do that?" Also he wanted to be able to give better relief to those who were in temporary want. Since his presidency commenced the Council has done a good thing in re-investing the Benevolent Fund money in ground-rents; thereby the income from this source has been increased by a third, and Mr. Carteighe apologised for the Council not doing so much in this way during the past year, but it was not for the want of willingness, he added. Passing on to the examinations, it was again noted with satisfaction that the number of candidates had increased, with a corresponding revenue. This must stop some time; it would, he thought, and considering the condition of the drug trade, it was wonderful that so many young men came forward; indeed, just at the last Preliminary examination the number was more than ever before. Why he would not venture to say. Perhaps it was carelessness on the part of the parents. (Laughter.) He noted with satisfaction the appointment of Dr. Thomas Stevenson as Government visitor to the examinations, and trusted that he as a distinguished toxicologist would take as great an interest in the examinations as Sir Douglas MacLagan does in Edinburgh. Passing on to the *Journal*, he said that was a thing which some members always liked to have a shy at, so he might as well say something himself—(laughter)—and that something, it quickly transpired, was a shy at this journal.

TIT FOR TAT.

Yet it was not quite that. It was the advertisement part of the organ which Mr. Carteighe had to speak about. Wo,

said he, referring to himself and his colleagues, have to be content with what advertisements we can get legitimately; as a society and a learned body we could not adopt the business methods of other journals, and he would be sorry if the advertisement part of his journal increased so much that the text could not be found. The meeting laughed at this flash of wit, and faces lengthened when the speaker proceeded to say that some had an idea that they should not take any advertisements at all; but they were brought back to a state of equanimity by the bold assertion that there are actually in existence persons who think that advertisements in a journal of moderate size are not a disadvantage. Let us pass over what was said regarding the library, the lending of books, and a compliment to Sir Henry Roscoe. Nothing of moment was added to what is stated in the annual report. Mr. Carteighe's next topic was

EDUCATION.

When the Pharmacy Act passed the idea which the leaders of the Society, including Mr. Sandford and Mr. T. H. Hills, then had was that men would go straight on from the Minor to the Major, and the course of instruction in the School of Pharmacy was adopted to suit this purpose. But a time came when it was recognised that this was a mistake; the qualifying examination satisfied most individuals, and to come up with the times the school curriculum was changed, so as to give two complete courses of instruction in a year. This has "made a mess" of the thing, said the speaker, so the Council have reverted to the old order of things, and the effect on the school had been highly satisfactory. Then he proceeded to tell the meeting that the school did not benefit financially by the change; it was done solely in the interests of sound education, a thing for which many of the country members only gave their guineas. He contended, moreover, that it was to the interests of the whole pharmaceutical body to have well-educated men amongst them, and he said with satisfaction that there were in the craft many brilliant chemists who were educated at that school. There was

NOTHING TO SAY ABOUT CARBOLIC ACID

except what was in the report; but Mr. Carteighe explained the position, how the Council had decided that the acid ought to be in the poisons schedule, how they had taken all the steps they could to get it there, and how the Privy Council would not move—because they had a Poisons Bill on hand, it was said, but really (this he knew from private sources) because the advisers of the Privy Council considered the importance of the acid for disinfecting purposes to be so great that no restrictions should be placed on its sale. He had tried to show these advisers that the restriction would not apply to wholesale quantities; but even his persuasive powers had failed to convince them on that point, and so we have the poisonous acid free to be sold by and to all and sundry.

RESEARCH

then came in on the paragraph in the report which refers to that, and again the anti-vivisection circular turned up, in a passing allusion to the fourteen gentlemen who had been selected from the candidates by the anti-vivisectionists. It was perhaps not wise for him, he thought, to refer to the matter again, but he wished these gentlemen had used their position as members of the Society to discuss the matter in the Society, and not lend themselves to an outside body in order to disturb the harmony. He protested against any interference with the Society's work by an outside body. (Hear, hear.) All difference in the trade in the past had been due to want of unity. The Pharmacy Bill of 1865 and 1866, which would have given the trade all that was now asked for, had been wrecked on that account, and it was out of the ruins that they built the poor miserable Poisons Bill which they now had for a Pharmacy Act. It was a pitiful thing, he thought, that these gentlemen should take money from other societies for a poor miserable thing like anti-vivisection. While the meeting pondered over this the President proceeded to speak of

INFRINGEMENTS OF THE PHARMACY ACT.

The only argument advanced for non-prosecution in certain cases was that the Council had good reasons for not doing so, and by a dexterous twist Mr. Carteighe again succeeded

in delivering another drive at modern journalism. In the belief that it is a highly necessary thing for journals to go on the hunt for something to fill up their pages, and to get something spicy, he stated that they indulged in libel and abuse regarding the inactivity of the Council. Now, he said, we have to give a great deal more attention to keep ourselves inactive rather than active.

THE RAILWAY RATES

had been considered by the Council, and as it was their belief that it would be better to appeal to the fairness of the railway companies rather than indulge in wild protests, they had done that, and also addressed the Board of Trade. His opinion was that small parcels and empties were really carried at a loss. Moreover, he did not think that the companies really meant to charge the maximum rates, and, except in districts where there might be no competition, there would not be any cause for complaint. He appealed to the meeting to put faith in the directors of railway companies, just as they did in their own Council. If they did not get all they wanted, it was because the directors had good reasons for it.

THE FINISH.

Shall we follow the speaker for ten minutes longer? He was getting into some very ordinary matter now. The North British Branch, for instance, he referred to with satisfaction, especially to the presence of the Scotch representatives; then the new buildings, and the duties of local and divisional secretaries; even the Benevolent Fund was again spoken of for a minute or two. Passing to the changes in the Council during the past year, he had a few choice sentences to utter regarding Mr. Baildon, and these were followed by a few complimentary remarks concerning Mr. John Harrison. With the exception of Mr. Cornelius Hanbury, who happened to hold a medical qualification, and, therefore, could not be a pharmaceutical chemist, Mr. Harrison was really the first chemist and druggist who had been on the Council. He expected much from him, as he was a man of exceptional ability, and he trusted that he would be able to tell his fellow chemists and druggists what the Council did. There was occasionally severe growling from the press about their not discussing everything in public, but it was not their duty to provide pabulum for the pages of journals. This was not a fault—they came together to work. Some of their young friends had lately been speaking of what they would do, but he wished—dropping into the singular number—that that gentleman had inquired what the Council did and what it had power to do. It was all very well to speak about abolishing a law, or removing a tax, but these were things which the Council could not do. After referring to the election of the new honorary members as a business advantage to the Society, the President concluded his long address by a touching reference to the obituary paragraph of the report. Mr. John Williams's death he deeply regretted, as also that of Mr. Frederick Barron, a staunch friend and supporter of the Society, and a man of surpassing benevolence. As the son of Frederick Barron, the founder of Barron, Harveys & Co., he had been known as young Fred, and there were many good stories about his travels, and especially of his father's. The latter used to travel all over the country in a coach-and-four, and when he came to a country town he would fly into it blowing the horn himself, and, putting up at the best hotel in the place, he would invite all the chemists and druggists of the town to dine with him. (Laughter.) Young Fred had a regard for such old-fashioned ways of doing business. He did not know a bit about science, for he was brought up to the drug trade; but he always said that there was nothing like education for the rising generation. The speaker then formally moved the adoption of the report.

The VICE-PRESIDENT (Mr. Bottle) seconded the motion in a very brief speech, detaining the meeting only long enough to correct the President with regard to his share in the bolder policy of the annuities granted under the Benevolent Fund. Mr. Bottle claimed that not only was he not afraid of that policy, but he had been one of its pioneers, and was fully satisfied with the results, except in the one respect that he had hoped it would have brought in a much larger number of small subscriptions. On that point he had been disappointed.

DISCUSSION ON THE REPORT.

There was no great competition for the President's eye, and the annual hope of a merely formal meeting was for an instant indulged in, but it was disposed of by

Mr. PERCY WELLS, who opened criticism on the Council by asking if it was necessary to cumber the pages of the Society's *Journal* with the proceedings of the Pharmaceutical Society of Ireland. He often read those reports, but considered they were not edifying; he found them to be nothing but a record of disagreements and rows, and he considered that it was not within the purpose of the *Pharmaceutical Journal* to record such transactions. If there was an agreement on the part of the Society to report these meetings the quicker it was put an end to the better. He was sorry to have heard from the President that the Pharmaceutical Society was not formed on a business basis; his remarks, however, had borne out the general opinion entertained in the trade that the Council's sole object was the promotion of education. He was not going to join issue with the President on the question of education, and he admitted that a higher education ensured a higher degree of respect. But whether it brought in more money or not he did not know. Anyway, he was sorry that the President should have so definitely declared that attention to trade matters was not the object of the Society. He did not stand alone in this opinion. If the Council were to be judged by their actions they stood condemned. He did not wish to complain of the Council nor to make a row, but unless the members did come once a year and make their comments, trifling though the effect might seem to be, the Council would probably be much worse than they were. They all, when they got within the shadow of the Council, seemed to get atrophied in regard to trade matters. Mr. Wells continued to discourse in this strain, but in a tone which conveyed to his audience the impression that he was aiming rather to create a laugh than to promote a reformation. At all events, his remarks aroused much amusement and general cheers. After asking why the postage of the *Journal* was not charged in the *Journal* accounts, he returned to his original topic, and concluded by begging the Council to descend from the lofty heights to which they had mounted, and to concern themselves with the mundane affairs of the trade which they represented. He was afraid it was now of no use to ask for protection of the trade, but he urged that when intellect was employed to injure them, it was necessary to use all the intellect at their command to counteract the influence exercised against them.

Mr. LOMAS took up the remark which the President had made to the effect that it was desirable that all the trade should join them, even though they paid nothing, and suggested that the fee might be reduced, say, to half a guinea; and he thought a circular letter offering this proposal should be sent to all the trade, the postage being paid both ways. The Council did not seem to sufficiently appreciate the maxim that union is strength.

Mr. URWICK agreed that efforts should be made to bring in more members, so that the Society should rest on a broader basis than at present. He then remarked on the defectiveness of the register, as he said he was frequently receiving circulars and printed matter from the Society and elsewhere addressed to assistants who had been with him and had left him years ago. He produced three samples, which were afterwards handed to the Secretary. Mr. Butt intimated that if Mr. Urwick had advised the Registrar on receipt of such circulars the defects would be remedied; but Mr. Urwick replied that it was no business of his. Then Mr. Urwick added his protest against the interference of the Anti-Vivisection Society in the affairs of the Pharmaceutical Society. He was impartial in regard to vivisection, but he felt deeply annoyed at the twenty-eight members of the Society who had joined with others outside to try to influence the election, and at one time he had felt disposed to vote only for the three who were not recommended. These people ought to take the beam out of their own eyes before they attempted to remove the mote from other people's eyes. They ought not to wear boots or gloves or eat any meat if they were going to object to all experiments on animals. But people were becoming so sentimental nowadays.

Mr. WARREN, who was understood to speak as a divisional secretary, spoke of the indifference which he met with among

chemists as to the Educational Bill of the Society, and urged that something more ought to be done to benefit them as tradesmen. He had been told that the Council did give considerable attention to such matters as patent medicines, mediated wines, &c., but if that was the case, they might make their good works a little more manifest. They could afford to sacrifice a little dignity in order to gain some vitality. Why not have occasional evening meetings to discuss subjects of everyday interest? There was no reason they should remain the target for Somerset House, incompetent magistrates, and goodness knows who. The members ought to be encouraged to look to the Society whenever any difficulty arose in their business. The assembling of the local secretaries, as had been suggested, might be of use. But if something were not done to meet their present needs the Society would lapse for lack of sustenance.

Mr. SANDELL thought it would be a good thing if the London divisional secretaries were to meet together once a month. They must pull together. The antagonism to the Society arose out of ignorance. He also agreed with the suggestion of occasionally bringing up the local secretaries. There was no telling but that a genius might arise among them who would do great things for them.

Mr. BLAND rose, saying that was a day when they might ventilate grievances and provide the supply. He approved of Mr. Wells's text, if not of his sermon. It was a fact that among chemists they said that neither the Council nor its *Journal* was in touch with the trade. This was a settled opinion among a great many chemists and druggists. It was time that those bodies which hamper us, as had been said by Mr. Warren, should be taught that they were not to have things all their own way. He might refer to patent medicines. Not only had they reason to complain of the law itself, but they had reason to complain of the Commissioners of the Inland Revenue, who not only executed the law but assumed to a great extent the part of legislators also. The law was very difficult to make out, but he supposed they might regard Mr. Alpe's book as intended to provide a partial remedy for that state of things. He had carefully read that book, and rose from its perusal with the impression that it made confusion worse confounded. It was contradictory and inconsistent, and an unsafe guide. Mr. Alpe made out that there were six, eight, or ten qualifications, either one of which occasioned liability, because in the Act they were separated by the disjunctive "or." If it was the case why had the Act never been strictly carried out? It appeared that there was a great deal of potentiality in the Act, and that the Commissioners could, whenever they liked, give the screw another turn. There was a general impression among those with whom he talked that the educational objects of the Council were being too much pressed. They did not want razors to chop up firewood with. There were single subjects named in the curriculum which occupied the whole of the attention of some of the greatest men in the country, and yet the Council were going to undertake to teach all these subjects in a few months. Such education must be superficial. Mr. Bland then returned to the subject of patent medicines, urging that the Commissioners should be fought as Mr. Lamplough had fought them, and beaten them, years ago. He would not go to them; it was demoralising. He would advise the trade to go straight to Parliament. He remembered an opposition got up by the trade some years ago, and a member of the then Government said he had never known an opposition so effective which had been got up in so short a time and by so few people.

Mr. GILES queried the accuracy of the statement in the report that the expenditure had exceeded the income. According to his calculations there was a surplus of 4107.; and he still found a surplus, even if he carried to the account certain items which in his view ought to be put to capital expenditure. He objected to the way the accounts were shown. Why could they not be presented in the usual manner? This was a "financial statement"; what that was he did not know; it was not a balance-sheet; it did not give the annual expenditure, and it did not show assets and liabilities. He would propose that the auditors be invited to consult with the Council, to see if these accounts could not be submitted in the customary manner, showing a capital account and a general balance-sheet.

Mr. HAMPSON could not refrain from a protest against the

action which had been taken by the Anti-Vivisection Society. The way they had approached this subject had been most unfair, and they had done it in such a stupid manner that, if known to the Society generally, it must meet with their rebuke. There were many people connected with the Society who would scorn to do a mean thing, and it was only necessary that they should be made acquainted with what had been done to induce them to repudiate the absurd, stupid, and shameful action which had been taken.

Mr. MARTIN had understood Mr. Wells to argue that education was not a mundane matter, and that it had nothing to do with the concerns of this life. He thought the men who had passed through their schools would agree that the education they had received there was convertible into bread and cheese. In reply to another speaker he said the aim of the curriculum was to give a groundwork of scientific education. If they gave a course of education lasting over ten years there would be good reason to complain of them. The speaker who had addressed them urging that union is strength had surely made a mistake in pressing that upon the members of this Society. It should be addressed to those outside. It was the opposition of the chemists and druggists which had ruined their Pharmacy Bill in 1865, and had prevented their progress from that day to this.

Mr. GUYER wanted to speak on the subject of pupillage. Education was one of the purposes of the Society, but the business advancement of the members should also be kept in view. They were heavily handicapped. Competition was very great in this trade, as in others, but it must be faced. The Society might have done something to check the invasion of the stores twenty years ago, when they first started, but it was too late now. But about pupillage. When he was apprenticed a great many years ago it was in the establishment of Messrs. Randall & Son, of Southampton. At that time there were always in that establishment some five or six apprentices, besides five or six assistants. Now, he believed, they will not take an apprentice. Neither, he understood, did the great West-end chemists. Messrs. Bell & Co., he supposed, would not take them; the President, he expected, would not. How were the lads to get their knowledge; and were those chemists in the country who did take them to have a bar sinister put upon them because they did so? Is it to be only in the places where prescriptions are scarcely ever seen that youths are to be apprenticed? This was a topic worth thinking about. With regard to patent medicines, he did not think the abolition of the tax would do chemists any good. He would rather see the tax doubled or trebled. Mr. Guyer referred, in conclusion, to the anti-vivisection agitation, and said that two ladies had called in his shop at Torquay urging him to vote for the candidates recommended by the Society.

The PRESIDENT replied to the discussion. The subject of patent medicines might stand over for the present, as, according to notice, this was to be brought forward specially. In reply to Mr. Wells, he said the Pharmaceutical Society of Ireland asked them to supply their members with the *Journal*, and on grounds of friendliness they thought it was the right thing to do. The Society was not very well off, and they had supplied it to them roughly at cost price. It was obvious that, doing so, they could not do other than report their proceedings. Moreover, it must be remembered that a good many of their own members and associates resided in Dublin and Belfast, who were, of course, interested in those proceedings. Mr. Wells had referred to the Council as atrophied—had no backbone, he supposed he meant. But the truth was that men who wanted to get on the Council talked in their addresses about what they did not understand. They undertook to do things which when they came to the Council they found it impossible to carry out. Young men desiring to come on the Council would find it wise not to promise too much. As to the postage of the *Journal*, it was a small matter, but it was perfectly sound finance to make that a charge on the Society; the production of the *Journal* they charged against the *Journal*, but the delivery to the members they charged to the Society. They were accused by Mr. Wells and others that they did nothing for the protection of the trade, but he maintained that their educational policy was directly promoted in the interests of their calling. Every sixpence spent on education was convertible into money; the most successful men were those who had

the best education. What future was there for pharmacists if they could not secure their position by their superior ability? As mere traders they must be swallowed up by the great stores. His opponents were on the horns of a dilemma. They said he wanted to treat them too professionally, and was regardless of the trade interests of the body. Well, let them go for trade if they liked, but in that case they must understand the conditions. They must not expect any different treatment from grocers or any other tradesmen. If they wanted to charge for their brains, for their skill, for their time, they were making a professional charge, and they had not a leg to stand upon unless they made these charges on the basis of superior education. There were still, and always would be, people who would be willing to pay for personal attention and ability. They did not always want to go to these great corporations, any more than they liked to go to the great hotels where they were numbered but not known. They would rather pay a little more and have the personal attention of the landlord, and so there were plenty of people ready to pay for the results of education. It was said they did nothing to protect the trade. What were they asked to do? Go to Parliament and ask that the word "person" in the Pharmacy Act should include corporation? They recognised that the interpretation which had been put on the Act was unfortunate, but they had to face it, and consider what was the best thing to do. Of course they could prepare draft Bills, to be scoffed at and sneered at when submitted to Parliament. But it was within his (the President's) personal knowledge, and the members should know it, that the Government authorities would not allow such a Bill to pass. They do not consider that there is any injury to the public if the pharmacy of a company is carried on by a qualified man. Members of the House of Lords who had gone into the matter with him say they do not care at all who gets the profits of the business so long as it is under the control of a properly qualified man. Moreover it was not at all certain that they would not go further and demand that everyone who hands over a poisonous medicine in any pharmacy should be qualified. That was something for those gentlemen to think of who go away for weeks at a time. Nor would the House of Commons listen to such a Bill. The best friends of pharmacy in the House tell them there would be no chance for such a Bill. They say they see no reason why men should not invest their money in this business as well as in any other, and, besides, they consider the store system is better for the assistants. These are the arguments (said the President) they put before me when I am fighting your battles. The Bill now before Parliament has a reasonable chance of passing, because the Department agrees with us as to the principle of that Bill. But they do not agree that we should have the exclusive right of dispensing the prescriptions of medical men as is the case in Ireland; and when we take all these things into consideration some of us think the present uncertainty of the law is better than the condition might be if it were made more definite, and if I do not say more on this subject you may be sure that it is because I have very good reason. But what is all this criticism for? You do not pay us for our services. There is no thousand a year for your President. You send out your circulars, and after all you can only get seventeen gentlemen willing to come forward and serve you. It is perfectly preposterous you should bait us at these meetings, and insult and libel us in print; and it is no wonder if we become somewhat pachydermatous, and it is not surprising, perhaps, that when you do make a feasible proposition we are apt to look upon it as only another dig in the ribs. We do regard it as a great honour to represent you, and it is a great honour to be the President of this great Society; but there is another side to the question. Do not some of us reflect honour on the Society in working for it? We do not ask for rewards, but we think this side ought to be taken into consideration. If, however, I may apply a scriptural phrase, I should say for the Council that they forgive you, for you know not what you do. (Loud cheers.) After this spirited reply the President disposed of some of the other points which had been raised, in a quieter tone. Mr. Guyer's remarks about pupillage hit a difficulty in the trade. It is the case that the men most competent to teach the business are not inclined to do so, but he hoped the provision of better instruction outside would tend to relieve this objection, and that the

difficulty would in time settle itself. For his part, he felt that the true apprenticeship, as distinguished from what he might call the errand-boy apprenticeship, ought to be encouraged. With Mr. Giles's objections to the form of the accounts he agreed, though he thought that, as the Society was not a dividend-paying body, the present form was not objectionable; but the real reason why the accounts could not be presented in strictly accurate form was that the charter, or the by-laws, required that the auditors should be members of the Society, and that their auditors, men engaged in large businesses in the City, refused to give the necessary time to examine into all details of a full balance-sheet. If, however, he should be returned to the Council he would undertake to look into the matter and see exactly how it stood.

Mr. HOWARD HALL, who had generously spared the Society his usual comments on the figures, asked whether it was necessary to leave such a large balance as 400% at the end of the year.

The PRESIDENT said this would depend on the probable requirements in January. They did not lose much on balances.

The report was then voted upon, and was unanimously adopted.

NAMES OF FIRMS.

Before the next business came on some twenty members left. Then, according to notice,

Mr. PERCY WELLS moved the following resolution:—

That in any application to Parliament for further powers or for any amendment of the Pharmacy Acts, it is the opinion of this general meeting that it is expedient that the name or names of every proprietor or proprietors of a business of a chemist and druggist shall be displayed in or on the place of business in a conspicuous and legible manner, so that the public may know who vend or compound drugs and medicines, and that a clause or clauses embodying the foregoing should be inserted in the Bill.

He made a rather long speech in elucidation of it, and pointed out that in the Council's Bill of 1883 they had included something similar to this as one of the objects they thought desirable. If it was necessary then it was equally necessary now, though he did not think it would be of much use to merely (as was then proposed) deliver the names of the proprietors of businesses to the Registrar. In his remarks, without any intention to be personal, he would use the President as an illustration. If a person knowing of the reputation of Dinneford & Co., which was world-wide, wished to get a prescription made up by them and took it to their shop he would get it made up, not by Dinneford—there was no such name on the register, but in a business conducted by Mr. Michael Carteighe. He had no objection to the retention of the name of Dinneford, but he thought if that name remained on the labels the name of Michael Carteighe, as responsible proprietor should appear in brackets. The public should have means of knowing with whom they were dealing. There were some honourable exceptions, though he did not wish to infer by that that the President's conduct was dishonourable. He alluded to the course adopted by a well-known house in Manchester, who used the old name but added the names of the present proprietors. A similar course was taken by the firm of John Richardson & Co., though he was aware that was a wholesale house. He agreed with the President that in this trade everything depended on the confidence of the public in the individual, and his proposal, he thought, would help to create that confidence. The speaker, in conclusion, made complaint that sufficient notice of his motion had not been published, and this point was discussed between himself and the President at some length.

Mr. BARNARD seconded the motion, and gave some details of the competition of grocers and others who were established near his branch shops. The relevancy of these particulars was not made apparent.

After a few words of sympathy with the motion from Mr. Urwick and Mr. F. Andrews the PRESIDENT replied. His argument was that if the proposal were enforced it would not prevent large businesses from carrying on a pharmaceutical department. It would lead to the practice of lending names, which is so prevalent in France. The subject had received the serious consideration of the Council, and they had decided not to entertain it. He knew that the authorities

would not have it, and it was not reasonable to expect the Council to go forward with proposals which had no chance of passing.

Mr. WELLS asked, why then did they submit the proposal in 1883?

The PRESIDENT said that was exactly why they knew that the proposal would not be acceptable. No system savouring of espionage would ever be agreeable. Besides, the law had been altered so that Dinneford & Co., or any firm, could be sued in the firm name. You shake your head, said the President, but that is so.

Mr. WELLS declared that he never moved his head, and it appeared that it was the seconder, who was next to him, who had thus offended.

The PRESIDENT considered that if the object of the mover could be gained, the effect of it would be that it would open the door still wider for unqualified partnerships, as the legislature would certainly consider that the presence of one qualified person to take charge of a business would suffice. He hoped Mr. Wells would withdraw his motion.

Mr. WELLS, however, declined, and on a show of hands scored four votes, the rest of the meeting voting solid for the President's view.

PATENT MEDICINES.

After another twenty members had broken away, Mr. Theophilus Nicholls introduced the following motion, of which he had given due notice:—

That pharmaceutical chemists and chemists and druggists being licensed to keep open shop for the dispensing and retailing of medicines and drugs as regulated by the Pharmacy Act, the compulsory stamping of specialities prepared for sale only by the vendor, and not for the wholesale trade, is an unjustifiable impost and a curtailing of the liberties of the licensed pharmacist, and should engage the attention of the Council with a view to legislation thereon.

He expounded this proposal with much earnestness and fluency. Surely, when the Pharmacy Act was passed there was some *quid pro quo* for the pharmacists. But as a matter of fact they got no balance whatever, but, on the contrary, had to submit to absolute confiscation and plunder. With the competition all around them of drysalters, chandlers, grocers, ironmongers, and others, and, worst of all, of medical men, who gave bottles of medicine for sixpence, the London trade was deteriorating, and the only outlet for the poor chemist seemed to be to fly to—he would not say quackery—but to putting up his own preparations. And he was not even allowed to put up the preparations of the Pharmacopœia if he stated their uses, unless he stamped them. That, he maintained, was a wrong condition of things, and if the Pharmaceutical Council would represent the matter with anything like the energy which the matchmakers displayed towards the Right Honourable Robert Lowe, they could get them remedied.

Mr. FITCH followed with a perfect torrent of eloquence. He found that the prosecutions—or, as he would say, the persecutions—undertaken by the Board of Inland Revenue were never against oil shops, never against grocers, never against stores, but always against chemists. He complained, too, that the Board allowed one licence to suffice a big firm for fifty shops; the man with many branches pays no more than the man with a single establishment. Speaking of competition, he told of a grocer close by him who had taken up the sale of patent medicines; but he (Mr. Fitch) had taken care when he took his lease to have a clause inserted which said that the landlord should not let any other house for a similar business, and on that, after threatening the landlord with an action, he had got that opposition stopped. Chemists, he maintained, were unfairly treated. Drapers might recommend flannel to prevent rheumatism, shoemakers might recommend shoes to keep out the wet, and thus prevent colds, and chemists ought to have the right likewise to recommend the medicines they put up without being taxed if they do not advertise them.

Mr. JACKSON spoke in support of the motion, after which

The PRESIDENT replied. He said in his early days in the Council—about 1836, he thought—he and Mr. H. B. Brady proposed a motion advocating the abolition of the patent-medicine stamp, but they soon agreed they had made a great

mistake. As President of this Society he had frequent opportunities of learning the views of the Board of Inland Revenue, and he would suggest that it was much better policy in any difficulty with them to try to conciliate them, rather than to write and tell them they were going beyond the law. They were simply carrying out an Act of Parliament the object of which was to raise money, and the revenue from this source was increasing in consequence partly of the natural evolution of trade. The development of large retail businesses had brought about the more usual practice of putting up all sorts of medicines, and to meet this competition chemists also put up a great many more of their own medicines. The Board would never grant a special exemption to chemists which they would not give to others. Pharmacists as such were not primarily dealers in patent medicines. These were expressly exempted from the operation of the Pharmacy Act. The trade was originally in the hands of booksellers, and we had stolen it from them. We have no rights in regard to that trade different from those of grocers, booksellers, or ironmongers. He might say, too, that it was not true that chemists are the only people who pay fines to the Board. He had himself seen at Somerset House letters from others. But the reason that the proportion of informations is larger against chemists is that the people who put up medicines for the other traders—they were very well known; there was a firm in the north of London; he need not name them;—these people took care to protect their customers by stamping medicines whenever it was necessary to do so. And it was not at all uncommon for booksellers and others to write to Somerset House to ask if such-and-such labels were liable. It was not likely they could get the Act repealed; and if they could, they would commit as great a tactical blunder as when they obtained the reduction of the licence duty. They would simply have caravans and bicycles, with cars of penny and twopenny packages of medicines, going about the country. Was it not better to pay the tax? Go in for quackery if they liked; and try not to see how many unstamped medicines they could sell, but pay the stamp on as many as they could, and recommend them how they liked. Gentlemen seemed to regard the tax as one imposed upon them. The Board laughed at such an idea. They consider that the only tax imposed on chemists is the 5s. a year licence duty. If you go for repeal you won't succeed, but you will get some amendment which will leave you in a worse position than at present. The Board, he knew, had a scheme in its pigeon-holes for a more graduated scale of stamps. How would they like a $\frac{1}{2}$ d. stamp for penny and twopenny articles, a 1d. one for fourpenny and sixpenny packets, and so on? It would bring all the hucksters into the business all over the country. The Council were unanimous in believing that it was better to leave the matter alone. They would be glad to do something if they could. He had personally done a great deal for members in regard to this matter by personal visits to the Board on their behalf. It was a long stretch from patent medicines to the research laboratory, but they had men on the Council who could compass both. They might undertake to advise their members as to the liability of their labels, but it might happen that their views would be overruled by the views of the Board, and the Board were ready to give this information. What more could they do? He would like to correct the erroneous notion that Mr. Lamplough had fought the Board on any point similar to those which came before them. Mr. Lamplough's case was that his preparation came under the special exemption created by a second Act passed to free such articles as mineral waters and seidlitz powders. It was under that exemption that Lamplough's saline, Dinneford's magnesia, citrate of magnesia, and other articles could be sold without being stamped. Mr. Lamplough's action against the Board was a friendly campaign, and he knew that no one regretted it more than Mr. Lamplough himself. It had considerably injured his business. But they must remember that the Board still claim that if you mix with these effervescing substances some medicine which is not of the essence of the effervescence, if that was not an Irishism, such substances—many of those made by Bishop, for instance—were thereby taken out of the special exemption created by the Act.

Mr. NICHOLLS consented to withdraw his motion.

The next business was

THE ELECTION OF AUDITORS.

Only the necessary five were nominated. These were Messrs. F. H. Lescher (Evans, Lescher & Webb), S. L. Stacey (Corbyn, Stacey & Co.), Charles Umney (Wright, Layman & Umney), W. M. Watts (Battley & Watts), Francis Yates (Davy, Yates & Routledge).

The scrutineers were next appointed, and asked to meet at 10 A.M. the next morning.

The registers were produced, as required by the Pharmacy Act, and the President then declared the meeting adjourned till the next day at 3 P.M.

A VOTE OF THANKS

was passed to the President and Council with hearty acclamation on the motion of Mr. Urwick, seconded by Mr. Fitch. In acknowledging it, the President said they were much indebted to a society to the unwearied industry of their secretary. He was the one who had to bear the abuse of the members, both written and *vivâ voce*, often expressed under misapprehension, and it was not surprising if he became a little official—perhaps a little too official—sometimes.

The meeting closed at 4 P.M. exactly.

The following are the names of those who attended the annual meeting, exclusive of the Council and the officers of the Society:—

Andrews, Frederick	Luxmore, C. M.
Applegate, Edwin	MacEwan, Peter
Arkinsall, W.	MacGeorge, W.
Atkinson, J. G.	Maitland, T. C.
Barnes, J. B.	Martindale, W.
Bate, H.	Matthews, Henry
Bindloss, G. F.	Matthews, C. W.
Bird, H. C.	Morgan, D.
Bland, J.	Morrison, J. W. F.
Bowen, J. W.	Moss, J.
Boyce, J. B.	Naylor, W. A. H.
Broad, J. R.	Nesbit, J.
Brown, A. J.	Newe, F. C.
Browne, Frank	Nicholls, R. E.
Chaston, A. E.	Nicholls, Theos.
Cooper, Albert	Nicholson, A.
Cresswell, F.	Ough, Lewis
Cripps, J.	Parker, W. H.
Dampney, R. S.	Pascombe, F.
Darby, S.	Pickard, W.
Davenport, H.	Powell, T. H.
Davies, C.	Ridding, W.
Davies, R. H.	Robinson, R. A.
Diaper, Albert	Robinson, W. P.
Dymond, T. S.	Sadler, W.
Dyson, W. B.	Salter, W. A.
Finch, Sidney E.	Sandell, T. O.
Fitch, R. O.	Savory, A. L.
Gale, S.	Schacht, W.
Gerrard, A. W.	Scoley, T. E.
Gibbons, George	Sharpe, L. G.
Gradidge, J. H.	Sherburn, T.
Gravill, E. D.	Stamp, E. B.
Guyer, J. B.	Stephenson, J. B.
Hadden, W. E.	Storey, E. H.
Hall, R.	Strongetharm, W. G.
Hall, T. Howard	Sugden, W. A.
Harvey, W.	Symons, W. H.
Hatfield, Geo. B.	Tasker, W.
Hebbeler, K.	Taylor, George S.
Higgs, Alfred	Thomas, H. A.
Holding, John	Tiley, C. A.
Horrell, W.	Troke, Charles
Horsley, T. W.	Tugwell, W. H.
Hyslop, J. C.	Tuphohme, J. T.
Ince, Joseph	Turner, C. E.
Jackson, J. P.	Urwick, W. W.
Jameson, W. O.	Warren, W.
Kingan, D.	Wells, Percy
Kitchin, J.	Williams, W. L.
Knight, G. J.	Wilson, John
Lanee, W. M. J.	Wink, John A.
Lomas, J. W.	Wootton, A. C.



MICHAEL CARTEIGHE,
PRESIDENT OF THE PHARMACEUTICAL SOCIETY OF
GREAT BRITAIN.

It is seven years since we gave Mr. Carteighe's portrait, on the occasion of his election to the honourable position which he has held uninterruptedly since that time, and in the interval the journalism which he good-naturedly tilts at has marvellously extended the influence of THE CHEMIST AND DRUGGIST throughout the world, and some thousands will look upon Mr. Carteighe's features who have not done so before. And it may be said the president's seven years' hard work has sat lightly upon him. The remarkable influence which Mr. Carteighe has exercised in the Pharmaceutical Society is most effective on his intimate colleagues, who regard him with an enthusiasm approaching to hero-worship; and in the rank and file of the Society he is unquestionably popular, notwithstanding the position awarded to him this year on the election poll; a testimony rather to his vigour than to any deep-seated opposition to him personally.

ELECTION OF A NEW COUNCIL.

The adjourned meeting was held as appointed on Thursday shortly after 3 o'clock. Mr. Carteighe presided, and there were about a dozen other gentlemen present.

THE SCRUTINEERS' REPORT.

Mr. HOWARD HALL read this report, which showed that

3,371 voting-papers were issued,
1,672 returned,
17 disallowed, and
88 were received too late.

Showing that 1,699 were not counted. The following was the result of the poll:—

(1) Martindale 1,253	(10) Allen 1,156
(2) Southall 1,252	(11) Watt 1,131
(3) Greenish 1,228	(12) Newsholme 1,051
(4) Bottle 1,226	(13) Leigh 1,008
(5) Martin 1,222	(14) Carteighe 975
(6) Cross 1,221	
(7) Abraham 1,195	(15) Nichol 916
(8) Schacht 1,170	(16) Butt 898
(9) Hills 1,167	(17) Broad 893

The report was signed by the following:—

T. Howard Hall (*Chairman*)

J. W. Bowen	John Holding
J. C. Hyslop	Henry Mathews
T. O. Sandall	W. E. Hoden
Ed. B. Stamp	R. O. Fitch
Ralph Hall	Henry Bate
James H. Gradidge	W. Howell
Chas. Troke	P. C. Maitland
A. J. Browne	C. W. Luxmore
W. Harvey	T. E. Seoley
John W. T. Morrison	

Mr. HOWARD HALL said some of the scrutineers had raised the question whether voting-papers received by post on the 14th and 15th should be received, and it was pointed out that they could not be; but it was thought that at some future time an alteration should be made, so that the papers might be received by post on the day of the annual meeting.

Mr. CARTEIGHE explained that the regulation was made by Act of Parliament that the voting-papers should be received by post two days before the annual meeting, and that they could not alter. He then declared that the Council for the ensuing year would consist of the first fourteen gentlemen above named, and Messrs. Atkins, Gostling, Evans, Hampson, Harrison, Richardson, and Robbins. A vote of thanks was then awarded to the scrutineers.

RAILWAY RATES.

THE following is the text of the memorial which has been sent from the Pharmaceutical Council to the Board of Trade and to the principal railway companies, in accordance with the resolution passed at the meeting of Council on May 1:—

RAILWAY AND CANAL TRAFFIC ACT, 1888.

To the Right Honourable the President of the Board of Trade.

The Council of the Pharmaceutical Society of Great Britain, having duly considered the proposed new classification and schedules of maximum rates forwarded to the Board of Trade by the principal railway companies in Great Britain, and finding in them proposals of a nature calculated to affect very prejudicially the interests of chemists and druggists, humbly petitions the Board of Trade to give effect to the following modifications and suggestions in any and every classification or schedule approved by the Board of Trade:—

1. It is respectfully submitted that any augmentation of the already high rate of carriage for drugs and chemicals would be a great injustice to chemists and druggists; and it is suggested that drugs and chemicals in hampers and cases should be retained in Class 4, as at present, and not be advanced, as now proposed by the railway companies, to Class 5. A considerable number of the articles classed by the railway companies under the generic title of "drugs" are really goods which by themselves are carried in Classes 1, 2, 3, or 4, or even in Class C. Bulking these articles into Class 4 is putting them into the highest class which the railway companies charge for them individually, and it is submitted that this would be a sufficient rate to charge.

2. Small parcels have hitherto been charged on a diminishing scale varying with the amount of freight itself, a table of which is published in the "Clearing House Book" under the head of "Scale of charges for smalls under five hundred pounds," but the railway companies seek, in the case of two companies, to "double their maximum rates," and in others to charge "such reasonable sum as the company may think fit." As a very large proportion (about 90 per cent.) of the consignments made by [?] to chemists and druggists will come under the heads of "smalls," this proposed alteration is one which will seriously harass and injure their business. It is therefore submitted that no railway company should have power to charge what it thinks fit for small parcels, but that either the charges shall be regulated as heretofore, or that a *limit* of say 25 per cent. on the tonnage rate should be *fixed* by your honourable Board. It is further submitted that the maximum weight for "small

parcels" should be reduced to 448 lbs. rather than increased to 560 lbs., as it is proposed to do, and that railway companies be not allowed to charge for the fraction of a quarter of a ton as for a full quarter.

III. It is further submitted that the anomaly of empty bottles being subjected to the same rate of charge as valuable merchandise should not be sanctioned by the Board of Trade, and that returned "empties" ought not in fairness to be placed in a higher class than Class 2. As an instance of the inconsistency of the proposed new classification in this respect, it may be pointed out that whereas new glass bottles are to be placed in Class 3, bottles which have been used and returned unwashed are to be placed in Class 5, although the original value of such bottles has been lessened. What has been urged in Clause II. respecting "small parcels" is also applicable to "empties," as these are almost entirely packages under four hundredweight.

The Corporate Seal of the Pharmaceutical Society of Great Britain was affixed hereto, May 14, 1889, in pursuance of a Resolution of the Council of the said Society.



Seal.

MICHAEL CARTEIGHE,
President of the Pharmaceutical Society
of Great Britain.

Trade Notes.

MESSRS. LINDSEY & SONS, makers of trusses, &c., of 32 Ludgate Hill, London, have opened a branch business at 8 Broad Street, Oxford.

MESSRS. JESSE FISHER & SONS, manufacturing chemists, formerly of Ironbridge, Salop, have removed their factory to the Phoenix Chemical Works, Bradford, Manchester.

THE SILICATED CARBON FILTER COMPANY, Battersea, London, S.W., have appointed Mr. Thomas Parkes, of Mechanics' Institute Buildings, Montreal, their wholesale agent for the Dominion of Canada.

THE directors of Liebig's Extract of Meat Company (Limited) recommend a final dividend for 1888 of $12\frac{1}{2}$ per cent., making, with the interim dividend, $17\frac{1}{2}$ per cent. for the year.

MESSRS. HEARON, SQUIRE, & FRANCIS are to be complimented on the very artistic two pages which they publish in this issue, and which form the frontispiece and rearguard of their useful pamphlet of "Memoranda of Newly Approved Remedies."

PETERMAN'S COCKROACH AND BEETLE FOOD, an article of American origin, but now supplied from the London dépôt at 57 Farringdon Road, has proved singularly successful in two houses occupied by members of our staff. The beetles seem to like it, but it is their last meal.

WE are publishing an advertisement of a business for sale well suited for an English pharmacy at Cairo. There is no English chemist in Egypt, and there seems to be a good opening for one. A suitable man might make a big thing out of the English visitors to the land of the Nile.

A NEW sticky fly-paper, the attractive and retentive substance of which seems to be a compound of resin with honey, spread on a specially-prepared impervious paper, is offered to the trade by Messrs. Tunbridge & Wright, manufacturing chemists, Reading. It doubles up without injury, and is therefore not messy to handle. It is described as "The fly cemetery, the stickiest sticker extant, or honey fly gum paper."

MESSRS. C. F. BÖHRINGER & SONS are advertising a list of the chemical products which are sent from their great works at Waldhof, near Mannheim. The firm are well known as perhaps the largest makers of quinine and cocaine, and it is within the last three years they have added to their manufactures the most important alkaloids and glucosides, glycerine, tannic and gallic acids, &c. They have branch houses at New York and Milan, and seventy-seven agents covering the whole of the world.

MESSRS. WATSON & WATES, wholesale and manufacturing homœopathic chemists, have asked our attention to their new style of counter show-case for homœopathic medicines, which they describe as the "Acme." Its peculiarity is that it stands upright on the counter with the glass front facing the customer, and with the various medicines (pilules, tinctures, and external applications) ranged very prominently in view. The case is about 22 inches high, 20 inches broad, and 8 inches in depth, and will be supplied in mahogany, oak, walnut, or ebony, to match other fittings. This firm and other homœopathic chemists supply, in most cases, the stronger forms of medicines—mother tinctures and first decimal dilutions. They seem to consider that the old theories of dynamisation and infinitesimality have had their day, and the majority of homœopathic practitioners rely now on appreciable doses, administered, however, in accordance with the principle of *similia similibus curantur*.

Personalities.

THE executors of the late Mr. Nicholls, chemist, Cogan, near Cardiff, have disposed of this business to Mr. Pearson.

MR. L. WING, chemist and druggist, has opened a shop at Lower Camden, Chislehurst.

MR. ROBERT MCALL STEWART, of Kelvedon, Essex, has succeeded to the business of the late Mr. Arthur Cooper Market Place, Ashby-de-la-Zouch.

MR. C. F. G. MEYER, of Meyer Bros., the wholesale druggists of St. Louis, U.S.A., is making preparations for an extended European tour. He was to leave America on May 15.

DR. EDWARD LIVEING has been appointed Registrar to the Royal College of Physicians, in succession to Sir Henry Pitman. An annual honorarium of 500 guineas is attached to the post. Sir Henry Pitman has been appointed Emeritus Registrar with the same honorarium.

MR. FRAMJEE DINSHAW PETIT, a Parsee gentleman of Bombay, has placed a sum of 75,000 rupees at the disposal of the Governor for the purpose of erecting a laboratory for scientific medical research in the vicinity of the Grant Medical College. The work is to be proceeded with at once.

AT a recent meeting of the Linnean Society Mr. Mitten, chemist, of Hurstpierpoint, who stands high as a muscological authority, contributed a paper on all the known species of *Musci* and *Hepaticæ* recorded from Japan. An interesting discussion followed on the character of the Japanese flora.

THE will of the late Charles James Blasius Williams, M.D., LL.D., F.R.S., physician extraordinary to the Queen, and senior consulting physician to the Consumption Hospital, Brompton, formerly of 49 Upper Brook Street, and late of Villa du Rocher, Cannes, France, who died on March 24, has been proved by Harry Samuel Williams, the son and sole executor, the value of the personal estate being sworn to exceed 76,000*l*. The testator bequeaths his property to his wife and children.

MR. HENRY S. WELLCOME brought together a distinguished company at the "breakfast" he gave at the Hotel Previtali on Sunday last, in honour of the retiring Consul-General of the United States, the popular Governor T. M. Waller. The company numbered forty-five, and included, in addition to the special guest, his successor, Consul-General New, and a number of the best-known Americans now in London, including Mr. Morgan Richards as the only representative of the American medicine interest. Messrs. T. P. O'Connor and Henniker Heaton represented the British Legislature, and the rest of the company was made up of authors, actors, artists, and journalists.

A CANDIDATE at the recent Minor examination said that (1) a flower stalk was its pedestal; (2) a premocarp consisted of two pericarps; and that HI was idiotic acid. He told his tutor he had answered every question, and could not understand why he did not pass.

London Hospitals.

LONDON without its hospitals would be a sorry place for the poor to live in. We should not, we think, have a medical science in this country which we could call our own, and, for that matter, pharmacy would be in an extremely embryonic condition. It is not so long ago that we took our pharmacy from the metropolitan hospitals; their pharmacopœias were the predecessors of that which now dominates our calling, and even yet the practice of our physicians is immensely influenced by their hospital training. To what extent medical science is now fostered by the hospitals is not within our province to speak, but it may be said that the greater part of medical literature is the outcome of hospital practice; and when we recollect that in the twelve principal hospitals of London over half a million patients are treated annually, we get a fair idea of the variety of treatment which is available to our medical practitioners. Conversely, the pharmaceutical practice in the hospitals must be extensive and varied, and should yield some facts of interest to pharmacists generally. In this hope a CHEMIST AND DRUGGIST representative has made himself acquainted with the working of the dispensaries attached to some of the hospitals, and in a few articles we propose to give the results of his observations, together with such historical facts regarding the institutions as will add interest to our sketches.

If we were to rank the hospitals according to the amount of work which they do annually, they would stand thus, the figures representing the numbers of outdoor and indoor patients treated in 1887:—

St. Bartholomew's	164,410✓
London	76,048
University College	33,030
Middlesex	35,664
Guy's	30,000
St. Thomas's	29,448
St. Mary's	28,428
Royal Free	25,894
Westminster	25,553
German	25,358
Charing Cross	24,193
St. George's	20,811

These comprise the first twelve, but there are fully a hundred other institutions (hospitals and dispensaries) which treat more than half a million patients. The London Hospital with its 150 years' record is a comparative youngster beside St. Thomas's and St. Bartholomew's. St. Thomas's is a very ancient institution, as authentic records show that it was founded by Richard, Prior of Bermondsey, in 1213; but St. Bartholomew's existed a century before that, for it was in 1102 that Rahere, the king's minstrel, established the priory of St. Bartholomew. These priories were the forerunners of the hospitals, and the good men who passed their lives in them were almost as skilled in the cure of the sick as they were ardent in the care of souls.

ST. BARTHOLOMEW'S

stands, therefore, the first in antiquity as well as in modern usefulness. Little regarding its progress from the foundation to the Reformation has come down to us. The bluff King Hal, mainly through the influence of Bishop Ridley, on December 27, 1545, made over to the Mayor and Commonalty of London, Grey Friars' Church, which included amongst other things the ground and part of the buildings now occupied by Christ's Hospital (Bluecoat School) and the hospital of St. Bartholomew in West Smithfield. The Lord Mayor of that day was Sir Richard Gresham, father of Sir Thomas Gresham, in whose memory Gresham College was founded. Here we may recall the fact that the Royal Society was founded by Gresham College men, who obtained charter of incorporation from Charles II. in 1663. Sir

Richard Gresham gets the credit of the work of refounding St. Bartholomew's; but the story goes that Bishop Ridley, then the king's right-hand man, asked the Lord Mayor and his colleagues to dinner one day (he knew the shortest way to their hearts), and under the influence thereof he induced them to contribute 500 marks annually for the support of the hospital. And so it was re-established, and by 1547 it had got fairly to work. From that time to the present the record is unbroken, and the books of the hospital show how it has been maintained.

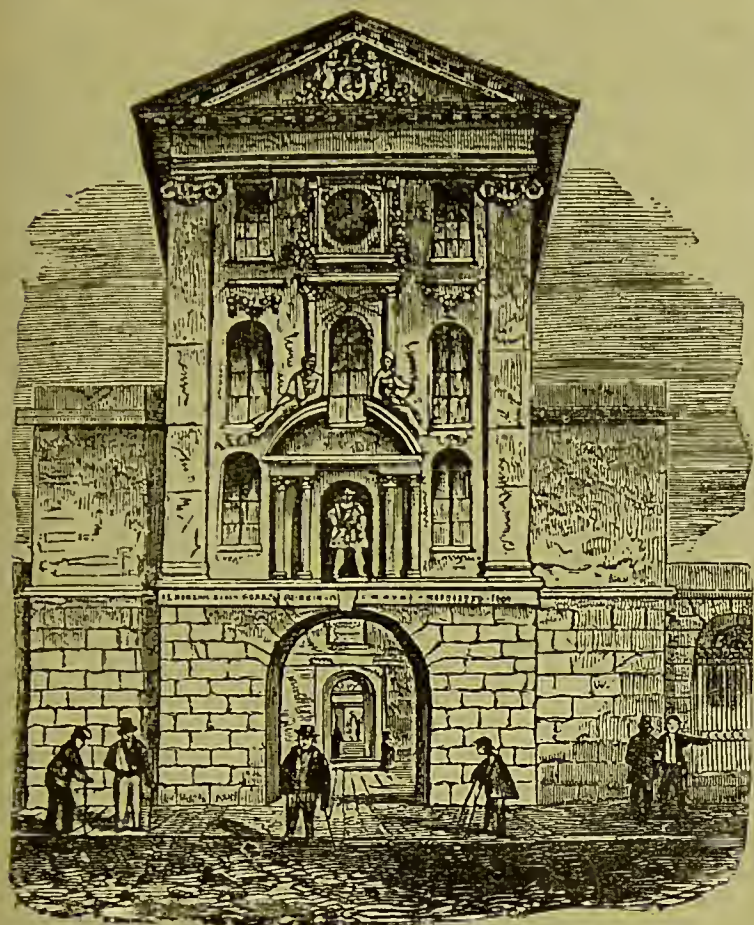
THE DISPENSARY IN THE PAST.

Although it is probable that the dispensary of the institution dates from its re-establishment, it is not till fully twenty years later that mention of it is made in the hospital books, but we find occasionally an entry which indicates the existence of the compounding department; such, for instance, as "a great kettle for the surgeons to boyle with." In 1572 mention is made of William West or Weston, "poticary of this house," who, pleading inability to live on his salary owing to the increase in the number of the poor, had his "wage" raised to 16*l.* 13*s.* 4*d.* a year, payable quarterly, and we gather that this included the supply of "all poticary ware." But he failed to attend to his duties at this noble salary, and in 1585 he was succeeded by John Napper, a grocer, who within three years gave way to Roger Gwynne, a real apothecary, who waxed fat on 37*l.* 12*s.* a year. Meanwhile little change seems to have occurred in the supply of physic, and the growing demands of the hospital resulted in an inquiry, the outcome of which was the better equipment of the apothecary's shop, to insure greater purity of the "oyntments, salves, and phisicke" supplied to the poor, and the apothecary of this date, Mr. Humphrey Croxton, was provided with rooms in the hospital and a stipend of 16*l.* yearly. It is interesting to note that "brasse mortars and braziers, a great brasse mortar, and two iron pestles, and a block for the same, joyner work," and other things which constituted the first furnishings of the "apothecaries' room," cost the hospital in that year 55*l.* 7*s.* 4*d.*, a goodly sum in those days. Moreover, we get a glimpse of Mr. Croxton's skill in the item of 4*l.* paid to him for "probinge of the druggs and other things." At this time Harvey, the discoverer of the circulation of the blood, was physician to the hospital, a position which he held for thirty-four years from October, 1609, and his name is still honourably associated with it. The medical school had its beginning in 1662, and is now the largest in the metropolis. From these early times to the present we miss, so far as the apothecaries' shop is concerned, all definite record of its progress. The accounts exist, and the names of all the apothecaries down to the present; but where the "great kettles," the "brasse mortars," and what not, have gone, there is no one to tell. About five-and-twenty years ago, when the late Mr. W. Foster White (an old Bluecoat boy) was treasurer of the hospital, he took a warm interest in the apothecaries' shop. The arrangements of this important part of the establishment were bad; all the wood-work was old and worm-eaten; the bottles, like men, were of all sorts and conditions; and the large jars for stock preparations were old and rusty; indeed, Mr. Humphrey Croxton may have handled these things, for all we know to the contrary. A clearance was made, the apothecaries' shop completely fitted throughout, and a new pharmaceutical laboratory established.

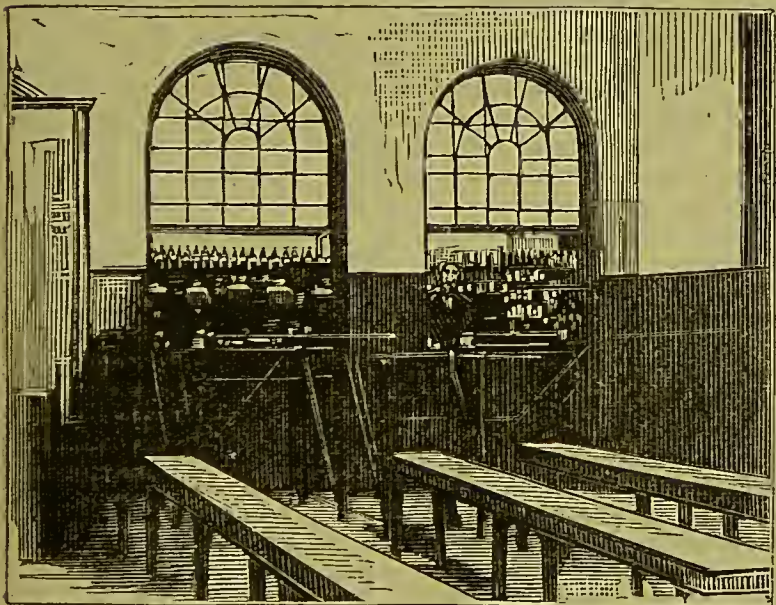
THE HOSPITAL BUILDINGS.

Digressing for a moment, we may say that the hospital consists of more than twenty buildings, and is surrounded by West Smithfield on the north, Giltspur Street on the west, the grounds of Christ's Hospital on the south, and Duke Street on the east. We enter it from West Smithfield by the gate of Henry VIII., a striking piece of architecture which deserves reproduction. Within we reach a quadrangle formed by the principal wards, and here, on these bright summer days, the square is always alive with bare-headed students and pale-faced patients, most of whom are from the surgical wards. The stately buildings which form the wards are backed by others of less imposing appearance, such as the college (for resident students) and nurses' home on the east, the church of St. Bartholomew-the-Less on the north (re-

stored in 1865), and on the west the new medical school (built within the last ten years) and the library. In the south-west corner stand the apothecaries' shop and pharma-



ceutical laboratory. To reach these we walk down the west side of the square and through the waiting-room, where the female patients from 9 A.M. to 4.30 call for their physic.

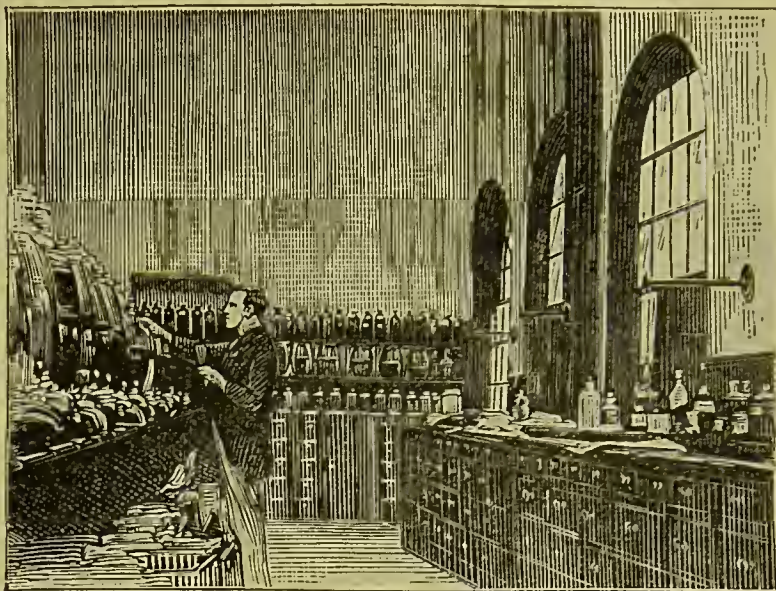


Many a strange physic-bottle passes through these windows, and many a sufferer has sat on the seats.

THE DISPENSARY

Within there is the apothecaries' shop, or dispensary, a lofty oblong apartment lighted from the roof. On one side a dispensing counter runs the whole length, and here five dispensers, under the charge of Mr. William Parsons, F.C.S., the principal pharmacist, are at work from nine to six. The rest of the wall space on two sides is occupied by drawers and bottles, all the toxic remedies being kept by themselves. In the centre the stock-mixtures are stored in large glass barrels, tapped for convenience. A small room to the north-west of this apartment is used for the storage of potent remedies which are not required so frequently, as tincture of opium and the like, and a room to the south is used for fine chemicals, stocks of tinctures and fine drugs, and as an office

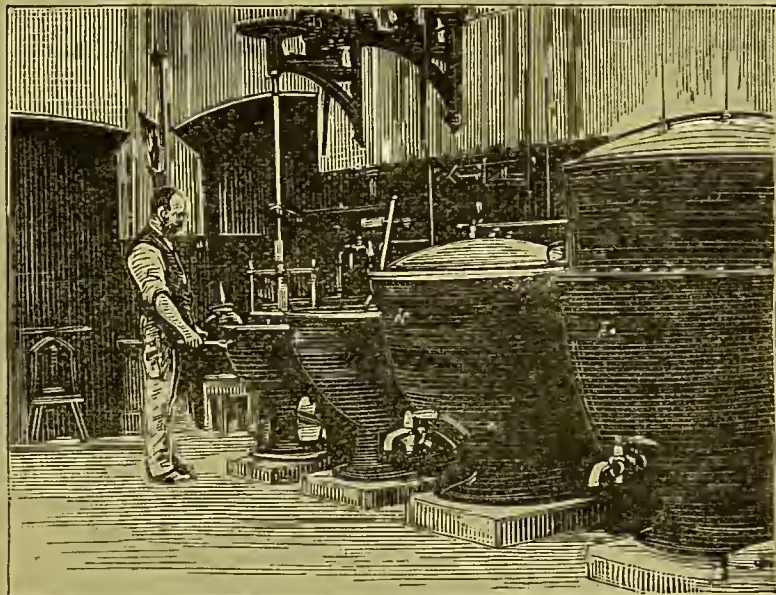
for Mr. Parsons. In all respects the arrangements of the dispensary are well adapted for performing a great deal of



work in little time and at the minimum of risk. The most striking part of the establishment we have in

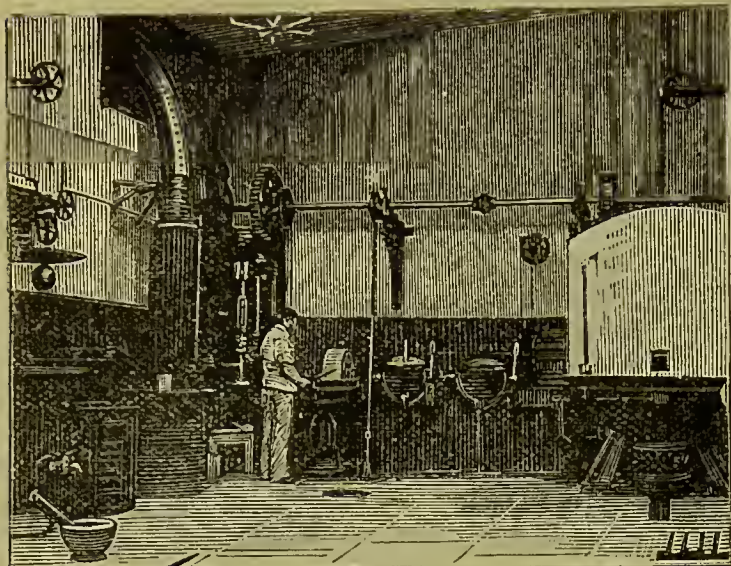
THE PHARMACEUTICAL LABORATORIES

situated behind the apothecaries' shop. No hospital in this country can approach, and few wholesale houses can boast, such completely equipped laboratories as these. A glance at the west side of the principal laboratory (which, by the way, the camera of Mr. Jenks, assistant dispenser, has enabled us to reproduce) will show the size of some of the



apparatus. Here we have a 200-gallon evaporating pan, used daily for supplying boiling water for making infusions—all used in the establishment, by the way, are fresh. The others are of 100 gallons and 80 gallons capacity, and are duplicated on the other side of the giant. The next view shows the north side of the room. Here the chief apparatus are a grinding mill with its cover (the largest object on the right), a sifting apparatus, on a somewhat similar principle to that figured in the "Art of Pharmacy," but consisting of a frame for a single large drum sieve, a few small evaporating pans, and towards the left a small ointment mill, with a single stone runner. To this is attached a very ingenious arrangement for carrying off any ointment or paste as it is mixed. It is perhaps not generally known that when the ointment reaches this stage in such a mill as we are referring to, it slips round the edge of the stone on to the side; taking advantage of this the engineer of the laboratories has within the last few weeks attached to the side of the stone, and touching it, a small metallic gutter (which is fixed to the axle), and this conveys away the ointment or paste as it is finished. We have seen the tiny apparatus at work, and it was taking away a mixture of glycerine and extract of

belladonna in a wonderfully smooth condition, and saving time as well as manual labour. There is in the laboratory a



large slate slab for mixing ointments. It is the top of a hot-air chamber, and can be heated up considerably, so as to assist mixing. Another piece of apparatus is worth mentioning; this is a continuous still fixed high up on the east wall of this laboratory. A steam-pipe from the boiler beneath heats the still, the steam from which passes through a capacious head into a condenser fixed within a foot of the still and on the same level; from this the condensed steam passes directly down to a 200-gallon reservoir standing beneath. The still and condenser are covered with mahogany, brass-bound, so that the distilling operation is not seen; in fact, saving the turning on and off of the steam and the cold stream of water for condensing, the apparatus never receives any attention. It is practically automatic; and this is necessary, because it is mainly required for providing the chemical laboratory of the medical school with distilled water. This laboratory stands immediately to the north of the apothecaries' shop, and the water is passed on to it by means of a steam-pump. We may mention here that Dr. W. H. Russell, F.R.S., the present President of the Chemical Society, is the professor of chemistry at the medical school. In addition to this principal pharmaceutical laboratory there are two other smaller apartments attached to it, in the larger of which tinctures and other spirituous preparations not requiring heat are made. The spirit-room is connected with this apartment, and, as in all hospitals, the stores of wines and aerated waters for the use of the patients are kept here. It is also worth mentioning that proof spirit is bought ready made. Having described the laboratories so minutely, it is unnecessary to refer in detail to the work done. Three skilled laboratory men are constantly employed in it making all the galenical preparations of the British Pharmacopœia, saving such things as green extracts; indeed, anything that can be made is made, and all powders are ground on the establishment. It may be asked—Where do the drugs come from? Who are the suppliers? About that there is no secret. The committee select from amongst the applicants some six or eight of the largest City houses, and these are asked to quote or contract for certain articles, the supplies in this way being drawn from the different houses, and we may say that most of these are advertisers in this journal.

DISPENSARY NOTES.

Regarding the work in the dispensary little more need be said; we have already stated the hours, and may add that the dispensers have few spare minutes during the nine hours. As the hospital has a Pharmacopœia of its own (it was first published in 1718), many of the mixtures, lotions, ointments, pills, &c., are kept ready prepared, and a complete set of printed labels facilitates labour. The greatest caution is taken to prevent accidents with poisons, and in the hospital itself all potent preparations are kept in triangular-shaped bottles or pots specially made for the

hospital. One of the most important duties which falls to the lot of the head dispenser is to keep a correct record of all the drugs used in the dispensary. As used in the laboratories the quantities are entered in a day-book, and at the end of every month the totals are entered in a ledger. This system was commenced in 1836, and, as may be imagined, an interesting hour or two may be spent in looking through the books of past years and noting the increasing and decreasing quantities of the drugs used. Some, of course, such as linseed meal, only reflect the growth in the number of patients, for in 1836 the number was only a fourth of what it is now, and some medicines have correspondingly increased; but other items show a woful decrease, and nothing more than leeches, of which 96,300 were used in 1837, but now 2,000 last more than a year, and hundreds of these never live to suck a drop of blood. The hospital doctors are fond of some old drugs; hemidesmus root, for instance, is the "sarsa" of the place, and is much used, and although about ten times more quinine is used now than in 1836, the use of cinchona bark has also increased largely: the average in 1836-45 was 196 lbs. a year, in 1866-75 891 lbs., and since then it has fallen to 501 lbs. per annum. The growth of new remedies is admirably shown in these records. Take, for example, cod-liver oil—an article in this issue tells all about its introduction, and in the light of that it is curious to note that it was the year 1847 before it appeared in the hospital books—17 gallons used, and as its value in the treatment of chest complaints was recognised its use increased by leaps and bounds, until now nearly 1,500 gallons are used annually. The figures regarding bromide of potassium tell us of its comparative disuse until about twenty years ago when it was first employed for nervous affections, and now 1 lb. per year has been increased to 1 lb. per day. Chloral hydrate shows a record of continually growing use as we might imagine, but not everyone can tell us so well as these books how glycerine has grown in popularity since it appeared in 1852, when 32 lbs. of it were used in the hospital. From that time onwards, Dr. W. S. Church tells us in his papers on "Our Hospital Pharmacopœia" ("St. Bartholomew's Hospital Report," 1886), the growth in its consumption has been gradual and uninterrupted, until in 1885 it reached the enormous amount of 2,303 lbs., or upwards of a ton. This, it should be noted, was for use in medicine, not as a cosmetic. Dr. Church also mentions that Mr. T. Wakley's reports on the use of glycerine in the treatment of certain forms of deafness, dated 1851, are the first mention of glycerine as a medical agent. Carbolic acid tells a tale of its own and for Sir Joseph Lister. It came on in 1863 (5 lbs.), and up till 1866 less than 8 lbs. altogether had been used in the hospital; then we have an average of 47 lbs. per year up to 1870, and now the average is 1,300 lbs., the consumption in 1888 having been 1,792 lbs. Iodoform, December 28, 1875, 2 oz.; 1876, 4 oz.; 1877, 4½ lbs., and so on, doubling and trebling, until we have 118 lbs. in 1884, a falling-off to 90 lbs. in 1885, and last year 45 lbs. We should think that the Chesebrough Company must regard with pleasure the vaseline account—20 lbs. of it in 1878, 150 lbs. the following year, and here again gigantic strides to a ton and a half in 1885, and about the same in 1888. Lard, meanwhile, remains in the books, and its consumption last year was 1,406 lbs., while of lanoline 14 lbs. was used in 1887, when it was first introduced, and last year 7 lbs. stand in the books. We were curious to see how some of the later remedies were getting on, and selected antipyrin and sulphonal as typical. Of the former, 2 lbs. were used in 1886, 4½ lbs. in 1887, 8 lbs. in 1888; 14 lbs. have been bought this year, and its use is increasing. Four oz. of sulphonal served last year, and so far this year 6 oz. have been put in stock, and it is not expected that the *Pall Mall Gazette* has much medical influence in this quarter.

A word in concluding regarding the staff. Mr. Parsons, the chief dispenser, is a Somersetshire man, and received the elements of pharmacy there; then he assisted Dr. Symes, of Liverpool, for a time, and, after qualifying as a pharmaceutical chemist, he came to London some twenty years ago, and has been in St. Bartholomew's since. To the training which he had from Dr. Symes Mr. Parsons attributes in a large measure his progress to the responsible and onerous position which he now holds. His staff is an excellent one: every man is qualified, and all work well together—an important factor in hospital pharmacy.

BANKRUPTCY REPORTS.

HENRY BERGER CLARKE, 37 Mincing Lane, and late of 37 Great Tower Street, Chemical Merchant.

IN this case the receiving order was made on March 26 last, and a summary of the bankrupt's statement of affairs has now been issued from the Official Receiver's department of the London Bankruptcy Court. The accounts show gross liabilities amounting to 1,511*l.* 19*s.* 4*d.*, of which a sum of 1,491*l.* 19*s.* 4*d.* is unsecured, and expected to rank against assets valued at 103*l.* 10*s.* 4*d.*, after deducting 20*l.* for a preferential claim for rent. The bankrupt (as reported by the Official Receiver) states that he commenced his late business in 1877 with a capital of about 1,000*l.*, having for some years previously traded in partnership. In August, 1888, he made a private arrangement with his creditors, and paid a composition of 5*s.* in the pound, except to his principal creditors (who are the petitioners under these proceedings) and to a few others who did not assent. He was eventually compelled to close his business in January last, and is now employed as a traveller on commission. Of the liabilities, the sum of 1,087*l.* is stated to be due to the petitioning creditors, and to be chiefly in respect of accommodation transactions. He attributes his failure particularly to loss and liability in respect of accommodation-bill transactions with, and to the action of, the petitioning creditors, and generally to depression and falling off in his trade, and to his expenses having been in excess of his profits. The usual and proper books of account for trading had been produced, and he states that the household furniture at his residence belongs to his wife, in whose name the house stands. The first meeting of creditors has been called for May 17, and the public examination of the bankrupt has been set down for hearing on May 29.

GEORGE WILLIAM BENSON, 153 and 157A Great Portland Street, W., Retail Chemist and Druggist.

UNDER this failure, which occurred in March last, accounts had been furnished, showing unsecured creditors, 439*l.* 11*s.* 6*d.*; a partly secured creditor, 452*l.* 10*s.*, holding security valued at 50*l.*; a liability on an accommodation bill, 35*l.*; and preferential creditors for rent, rates, and taxes, 59*l.* 2*s.* 6*d.*; making the total liabilities 986*l.* 4*s.*, of which 918*l.* 19*s.* 7*d.* are expected to rank against the estate. The only assets returned are book debts, estimated to produce 17*l.* 4*s.* 5*d.*, and as these are absorbed in the preferential claims, the deficiency is shown at 918*l.* 19*s.* 7*d.* It appears from the observations of the Official Receiver that the bankrupt states he commenced business in 1885 with 200*l.* borrowed money, and in November of the same year he filed a petition for bankruptcy (with liabilities 608*l.*, and assets 129*l.*), under which proceedings a composition of 5*s.* in the pound was paid, and he continued his business. He attributes his present insolvency chiefly to his liability in respect of former claims (260*l.*) revived since the aforesaid composition, to his liability for money borrowed to pay the costs and expenses of such composition, to a judgment for damages and costs in a libel action brought by the petitioning creditors (102*l.*), and to his expenses having exceeded his profits. The bankrupt has produced a day-book, which he states was his only book of account, and states that the household furniture and effects were sold under a distress for rent in January last. The partly-secured creditor, who is the bankrupt's father, is said to hold the lease of the premises, 157A Great Portland Street. May 17 is appointed for the first meeting of creditors, and May 29 for the bankrupt's public examination.

Re E. A. A. FRY, Sevenoaks, Chemist and Druggist.

AT the Tunbridge Wells Bankruptcy Court, on May 9, Mr. E. A. A. Fry, chemist, of St. John's, Sevenoaks, was represented by Mr. A. W. Wardley, who applied to Mr. Registrar F. W. Stone for the approval of a scheme for the payment of 7*s.* 6*d.* in the pound, to be paid in two instalments of 3*s.* 9*d.*; the first at the end of the present month, and the second within three months. The composition was approved.

JOHN ILEY, Wolsingham, Chemist, &c.

AT the Durham Bankruptcy Court on May 8, before his Honour Judge Meynell, this debtor applied for his discharge. The Official Receiver having made his report, his Honour said he would grant the debtor's discharge after a six months' suspension.

A RECEIVING ORDER has been made against Robert Gent-Davis, described as late of 62 St. John Street, Smithfield, and Albert Square, Clapham, distiller's chemist, and formerly M.P. for Kennington. The act of bankruptcy alleged is the departure of the debtor with intent to defeat and delay the creditor. Mr. Gent-Davis, it is explained, was only receiver and manager in Chancery of the business in St. John Street, and his bankruptcy in no wise affects that business.

Gazette.

PARTNERSHIPS DISSOLVED.

Barritt & Dix, High Street, Croydon, chemists and druggists.

Clay, Dod & Co., Liverpool, wholesale druggists and manufacturing chemists.

Morgan & Kidd, Richmond, photographic paper and material manufacturers, trade enlargers, and frame makers.

Wing, Lewis & Co., or Wing, Aplin, Wilson & Co., Chislehurst, chemists and druggists.

THE BANKRUPTCY ACT, 1883.

NOTICES OF DIVIDENDS.

Clifford, Frederick, & Brand, Charles Fish (trading as J. Hollis), Rendlesham Road, Clapton, drysalts—first and final div. of 6*d.*, any day except Saturday, Chief Official Receiver's offices, 33 Carey Street Lincoln's Inn.

Darby, Fred, & Robertshaw, Edward (trading as Darby, Robertshaw & Co.), Bradford, druggists, drysalts, and pickle manufacturers—first and final div. of 9*d.*, May 20, Official Receiver's Chambers, Bradford.

Higgins, Ebenezer, & Broabdent, Robert, Hyde, Cheshire, mineral water manufacturers—first and final div. of 9*s.* 17-9*d.*, any day, Official Receiver's Offices, Manchester.

Whatley, John James (trading as Whatley & Co.), late of Fen Court, Fenchurch Street, and at Talbot Place, Blackheath, colonial broker—first and final div. of 2*s.*, any day, 14 George Street, Mansion House, E.C.

APPLICATION FOR DEBTOR'S DISCHARGE.

Aspray, Thomas Neville, Eastbourne Terrace, Paddington, dentist—June 6, High Court of Justice in Bankruptcy.

ORDERS MADE ON APPLICATIONS FOR DISCHARGE.

Hackett, Harry Eugene, Hyde Road, Gorton, and at Manchester, surgeon—discharge refused.

Jay, Alfred (trading as Jay père et fils), late of Fitzroy Street, Euston Road, present address unknown, wholesale perfumer—discharge suspended for five years.

Moorhouse, Edward Dobson, Manchester and Timperley, surgeon—discharge suspended for 18 months.

THE ammonia liniment of the United States Pharmacopœia is made from cottonseed oil and solution of ammonia. It is far from perfect, because the oil is difficult of saponification, and, as pointed out by W. Gilmour, requires the addition of a little olive oil. Instead of that Rother suggests 5 grains of resin to the fluid oz. of cottonseed oil, which produces a model ammonia liniment.

A HOLLOWAY'S PILL weighs, according to *New Idea*, 1 grain. The following is the formula [Cooley's] which is given:—

	Grains
Aloes.. .. .	36
Ja'ap.. .. .	18
Ginger	18
Myrrh	18

Syrup, a sufficiency to make a mass, and divide into pills of the required size.

TRADE "SANITAS" MARK. DISINFECTANTS

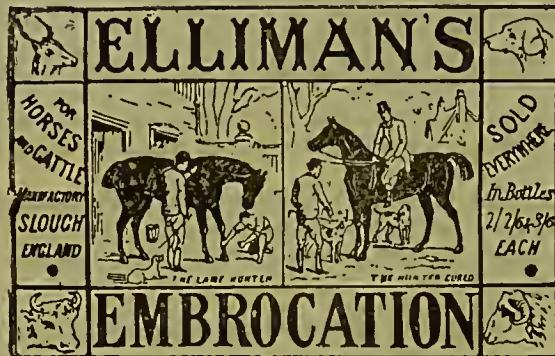
(FLUIDS, POWDER, SOAPS),
NON-POISONOUS, PLEASANT, AND BEST
Gold Medals, Calcutta 1884, Paris 1885, Antwerp 1886, Ostend 1888.

KINGZETT'S BACTERICIDES

Particulars sent on application to

THE "SANITAS" COMPANY, LIMITED,
Letchford's Buildings, Bethnal Green, London.

SHOW CARDS, 24×17 or 17×12,
Free to any Address.



See First Page, facing inside of front of Cover, in the
First Issue of each Month for latest particulars.



Noakes' Tins
for Druggists' use.

See Illustrated Advertisement on page 93.

STERN'S PUMILINE

ESSENCE, EXTRACT,
JUJUBES, SOAP,
PLASTER (St. Dalmas).

11 BILLITER SQUARE, LONDON, E.C.

MUMFORD'S

FARRINGTON ROAD, LONDON, E.C.

PURE CRUSHED LINSEED IS NOW
17/- cwt. CARRIAGE PAID

TO ANY RAILWAY STATION IN ENGLAND, AND HALF TO
STATIONS IN SCOTLAND, IRELAND, AND WALES. [2]

THE DIAMOND MARK

To secure the best Hungarian Aperient Water,

DEMAND THE DIAMOND MARK

And insist upon receiving the

HUNGARIAN APERIENT WATER

Sold by the

APOLLINARIS CO. (LIM.), LONDON.

Of all Druggists and Mineral Water Dealers. [2]

LIQUID EXTRACT OF CASCARA. TASTELESS.

ONE-FOUND BOTTLES AND WINCHESTER QUARTS.

JOHN MOSS & COY
GALEN WORKS, WILSON ST., NEW CROSS RD., S.E.

WRIGHT WHOLESALE & EXPORT
DRUGGISTS.
IMPORTERS & DISTILLERS
OF ESSENTIAL OILS.

LAYMAN MANUFACTURING
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TINCTURES.
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IN BOND.
SOUTHWARK.
LONDON.

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3

GLYCERINE & CUCUMBER, 9d. per lb.

Unsurpassed in appearance and effect, by using
ROUSE'S CONCENTRATED CUCUMBER PASTE

In Jars (free), 3 lb. 2s. 3d.; 1 lb. 4s. 3d. net.

Making respectively 3 lbs. and 6 lbs., costing 1d. per oz., by the simple addition
of Water and Glycerine.

Through any Wholesale House, or post free for P.O.

ROUSE & CO., 12 WIGMORE STREET, LONDON, W

OPINIONS OF THE TRADE.

J. E., Tottenham, writes:—"Cucumber Paste to hand; very pleased with
result; nicely scented and very little trouble to make."

L. H., St. Peters, Kent, writes:—"I think the preparation and your
mode of putting it up a great boon to chemists in a small way of business."

Fletcher's
Concentrated Liquors

See DIARY, 1889,
Pages 17 and 18.

EDITORIAL NOTES.

THE PHARMACEUTICAL SOCIETY
AND ITS COUNCIL.

THE annual meeting of the Pharmaceutical Society on Wed-
nesday repeated, in an accentuated form, the feature which
is becoming the stereotyped characteristic of these gatherings.
Years ago there were serious discussions, meaning something
and leading to something, at those meetings; now they have

become merely an unevenly-matched duel between Mr. Carteighe, on the one hand, and a little section of discontented but hopeful critics who, as Mr. Corney Grain would say, "want to do something, but don't know what," but who maintain their faith, almost touchingly, in the possible advent of the time when the leopard shall change its spots, the Ethiopian his skin, and the Pharmaceutical Council its hardly-earned character. The duel, as we said, is an unevenly-matched one, but it cannot be said to be an unfair one, because it is dependent entirely on the combatants who provoke it. Mr. Carteighe holds every string of the Pharmaceutical Society's work in his fingers, and knows intimately every detail of it. His antagonists seldom make the barest investigation into the facts and arguments which may be brought against them, and seem quite content with any text which gives them the remotest opportunity of expressing their views respecting stores, hucksters, and the Board of Inland Revenue. One after the other, and year after year, they toe the line with exemplary perseverance, and submit to be bowled over, not merely with equanimity, but even with enjoyment. Concerning taste, we are told, it is not to be disputed.

The selection of the battle-grounds this year was in each case a curious manifestation of the lack of judgment which seems to have characterised the opposition—if such it can be called—to the policy of the Pharmaceutical Council—if such there be. Four hands went up at the meeting for the proposal of Mr. Percy Wells, according to which Parliament is to be asked to compel all firms of chemists and druggists to announce who are their actual proprietors. The four per cent. or so thus indicated as the ratio opinion in favour of this motion would be much in excess, we should expect, of the proportion if the Society were fully polled. The system now existing presents no serious inconvenience to anyone, and there are no substantial benefits even suggested as the result of such an enactment. Are there really even four gentlemen who think it could be worth while to take off our coats for the sake of such legislation as that? Mr. Nicholls's motion had not much more real grit in it. We have been asking our numerous patent-medicine-grievance-mongers to formulate what they want; here is the articulate expression of their complaint. Mr. Nicholls asks the Council of the Pharmaceutical Society to go to the Commissioners of the Inland Revenue—or failing them, we suppose, to Parliament—and ask them to give chemists a special concession in regard to put-up medicines. It may be assumed that either the Commissioners or Parliament would like to have a reason for this extraordinary request, and Mr. Nicholls suggests that it would be quite enough to tell them that chemists think they have a right to a *quid pro quo* for being so kind to the nation as to pass the pharmaceutical examinations. It is impossible to imagine any dozen sane and sober men seriously drafting such a resolution into a Parliamentary Bill, and it does not seem very considerate for gentlemen to occupy the time of "this great Society," as the President calls it, with motions which seem to have no serious purpose.

Mr. Carteighe seems to have been more than usually disturbed this year at the criticisms which have been passed upon his policy, and he characterises some of those which have appeared in print as "insults and libels." Where these have appeared we know not, and we should scarcely have thought, if there have been such, they were worthy of even the contemptuous reference we have quoted. But it must not be supposed that in that allusion Mr. Carteighe has answered the reasonable criticism which has been directed against his conduct of the affairs of pharmacy. People who are quite as capable of exercising sound judgment even as himself have found grounds for dissatisfaction, and their

recognition of his undoubted abilities and devotion to the Society have not blinded them to the defects of his generalship. It is no answer to criticism of this kind to refer to "insults and libels," nor does it conciliate opposition to be told we are forgiven on account of our ignorance. The distrust of Mr. Carteighe's policy has found marked expression at the poll, the most notable feature of which is, without doubt, his position thereupon. The attempt will be made to discount the significance of this vote by attributing the result in part to the machinations of the anti-vivisectionists; but it has been quite evident that the consequence of the movement of the Victoria Street Society was to secure for the indicted councillors as many friends as opponents. It will be a regrettable result if the poll of Thursday should have the effect of disturbing the presidency of the Society; but it will be a distinct advantage if it should teach Mr. Carteighe that his own infallibility, obvious as it may be to himself, is not yet an article of faith universally accepted by his constituents.

The change effected in the Council by the recent election is the substitution of Messrs. Martindale, Abraham, and Marshall Leigh for Messrs. Butt, Nichol, and Savage (retired). Mr. Martindale has accomplished a great feat in leaping to the foremost position at the first attempt. Such success is in a sense undesirable, as it leaves open no opportunity for future reward for good service.

BACILLARY CONSUMPTION.

WE have had occasion at various times in commenting upon the Registrar-General's returns, to remark upon the steady decrease in the death-rate from phthisis in this country. Year by year since 1850, when the Registration Act may be said to have got into thorough working order, the death-rate has tended lower. In the first decade it was 3,943 per million of persons living, in the next 3,711, in 1870-80 it was 3,194, and since then the average has been no more than 2,666 per million, or a rate of nearly one-third less than what we had forty years ago. Remarkable progress indeed—and in what? Certainly not in climate. England and Wales have still as uncongenial a climate as they had then. Statisticians tell us that the improvement is due to our more enlightened views regarding sanitation and the practical results thereof. This is doubtless the most influential factor: but something is due, especially in these later years, to our enhanced knowledge of the disease, and the consequent improvement in the methods of treatment. The discoveries of the past decade in regard to consumption are of a startling character, and signalise in a remarkable manner the dangers to which all, irrespective of hereditary phthisical taint, are exposed in the common conditions of life. The tubercle bacillus is no longer a doubtful organism: pathological inquiry has proved its existence in the tissues of those who have died from phthisis, and medical experience has placed beyond dispute the belief that the bacillus is a potent contagium—that consumption is communicable from man to man. We are taught further that the bacillus is the creative force of other things than pulmonary consumption, which is merely a form of tuberculosis, the lung manifestations, in short, of the activity of the bacillus in that organ. There are other diseases, such as rickets and scrofulous complaints generally, which are equally entitled to rank as consumption, for they are tuberculous. These are facts which are now accepted without cavil by all enlightened physicians. Another development of even greater importance which is fast receiving the recognition to which it is entitled is the intercommunicability of tuberculosis between man and the domestic

animals. Bovine tuberculosis is one of the most common diseases amongst cows. It has been proved that where dairy cows are unknown pulmonary consumption in man does not exist. There are few countries of this kind, it is true; but the one or two that we have are at least remarkable in their freedom from consumption. For instance, the Esquimaux have no cows, and phthisis is with them unknown. The Tartars of the Steppes of Russia are in a like condition, owing to the fact that it is the milk and flesh of the horse that they use—the cow does not exist in their country. Here is inferential evidence of intercommunicability; but we have direct proof. In the first place, the bacilli of bovine tuberculosis and those obtained from the sputa of consumptive persons are microscopically indistinguishable, and their cultures are identical; secondly, it has been experimentally proved that the bovine bacillus is capable of producing by inoculation pulmonary tuberculosis; and, thirdly, veterinary surgeons, free from hereditary taint, have, after accidental inoculation with tubercular matter from the cow, contracted phthisis and died. We know, also, that those charged with the oversight of the public health are careful to prevent the flesh of tuberculous animals passing into consumption; and on this point it is curious to note that the Jews, amongst whom the death-rate from phthisis is exceedingly low, have always been careful in their choice of meat, especially rejecting that of animals whose lungs after death cannot be fully inflated. Another phase of the question naturally follows—if cows are afflicted with tuberculosis, what of their milk? To this Dr. Sims Woodhead and Professor McFadyean, of Edinburgh, give us a very decided answer. Of 600 cows which they examined, six gave milk containing tubercle bacilli; the tuberculosis extends to the udders; and as soon as that is the case all hope for non-infectious milk is gone. Evidence is rapidly accumulating in proof of the supposition that milk of this character is virulent, and it appears to explain the origin of mesenteric tuberculosis of children, cases of which are frequently occurring apparently without cause. To those who wish to follow this subject further, especially in regard to phthisis, we commend the work just published by Dr. Horace Dobell on "Bacillary Consumption." It contains an excellent and readable *résumé* of the writings of those bacteriologists who have made the *bacillus tuberculosis* their study. To this the author adds a cogent interpretation from the diagnostic stand-point. In this domain of medicine Dr. Dobell is a recognised authority. His plan is to attack the complaint in its first stage. This was his method of cure before we knew anything about the bacillus, and now that we do know of its existence we see that he has been right all along. The "first stage" simply means the *pre-tubercular* or *pre-bacillary* stage of the disease. For a proper comprehension of that we may explain that when an animal is inoculated with tubercle bacilli, there is at first no evidence of tubercles in its tissues; an interval elapses—Dr. Dobell calls it "the eventful interval"—and during this time he supposes that in perfectly healthy tissues the organisms are making food for themselves, not by cell disintegration—for no tissue change is observable either by microscopic or chemical means—but possibly by disarrangement of the molecular matter. This is the bacillary stage. In some individuals it is not possible for it to take place—in their contest with the tiny bacilli their energy proves too much for the enemy; but there are others in whom the bacilli increase and multiply at lightning speed; these are the individuals who are predisposed to consumption, in whom, probably, the food for the bacilli already exists. Such individuals exhibit, Dr. Dobell believes, a special form of constitutional decline, and he urges that physicians should find this out and adapt

their treatment accordingly. The last three chapters of his book are, therefore, devoted to advice regarding pre-bacillary and pre-tubercular diagnosis and treatment. It is not possible to epitomise this advice in short space, but we may say that the author has no faith in medicine alone, and insists upon consumptives living in the best possible climatic and sanitary conditions, with abundance of food, and just sufficient medicine to do what nature does too slowly. Elsewhere in this issue we quote a passage from the book which has a direct bearing upon this point.

CITRONELLA OIL.

SOME correspondence has lately appeared in Ceylon journals concerning the alleged adulteration of citronella oil with kerosene by the native growers. A native correspondent points out that a short time ago about 650 cases of kerosene oil arrived by boat at the Weligama Custom-house from either Galle or Colombo, and that about three-fourths of this quantity was straightway forwarded to Matara, Akurassa, and Kumburupitiya. All these places are in the southern part of the island, which is the one where all, or nearly all, the citronella oil is now manufactured. As it is improbable that the native inhabitants of the districts referred to would be in want of such a large quantity of kerosene oil for illuminating purposes, the correspondent infers, or rather he plainly states, that it is employed for adulterating citronella oil, which is subsequently sold as a pure oil to the European merchants in Galle or Colombo. The writer concludes as follows:—"If European merchants think that the citronella oil as supplied them by their contractors and that supplied direct by the proprietors of citronella estates are the same, they make a great mistake; for the oil supplied by proprietors and manufacturers is pure and free from any adulteration. It will now strike European merchants as strange that, in the contract which they entered into between themselves and the contractors, there is generally a conditional clause to the effect that the oil supplied by contractors will be *market oil*. If any dissatisfaction is ever expressed by a merchant as regards the oil thus supplied, the contractor's plea is that it is market oil, and that he is not responsible for its quality; but such an excuse could not be made by a proprietor."

With regard to this assertion, a gentleman who is said to be one of the best authorities on citronella oil in Ceylon states that as far back as 1883 he had his attention called to the practice prevailing among natives of adulterating citronella with kerosene—a sophistication which could not be detected, he states, even if carried out to the extent of 25 per cent.; and an English buyer of citronella oil on a very large scale adds that he could not find any pure oil whatever in the market. Whether adulteration of citronella is really carried on to the extent and on the systematic plan which these correspondents' letters would seem to indicate may still be open to some doubt, but it is quite certain that unless some such practice is resorted to it cannot pay the natives to manufacture or the merchants to export the oil. Like most other cultures which have been taken up in Ceylon on a large scale, the cultivation of citronella oil has been overdone. At present what are known as "native" brands are selling in London at $\frac{5}{8}$ d. to $\frac{3}{4}$ d. per oz., or, to calculate it in an easier way, at 10d. to 1s. per lb.; and the exports from Ceylon, in spite of the low prices, which have now existed for a considerable period, continue to increase. It has been recently stated on good authority that a citronella plantation, according to the amount of care bestowed upon it yields from eighteen to twenty-four bottles per acre per crop.

There are, in the most favourable circumstances, three crops annually, usually about March, July, and December, and an acre of grass may therefore be estimated to yield from forty-five to seventy-two 22-oz. bottles, or from 60s. to 95s. worth of citronella per annum. Out of this scanty return, distilling, packing, freight, and the profits of at least three middlemen have to be paid, and there cannot, therefore, in the most favourable case, be any but the barest margin of profit left for the cultivator. A further proof of the unremunerative nature of the citronella industry is that at least one of the principal European firms of distillers is said to have withdrawn from the market some time ago, when prices were still considerably higher than they are now, because they no longer found it profitable to manufacture this oil. The "F & K" brand of citronella enjoyed a high reputation for purity on the European markets, but we think we are right in stating that it is no longer manufactured now. Another English grower in Ceylon, Mr. Winter, whose oils are equally highly esteemed, still continues, we believe, to manufacture citronella, or did so until recently, but we doubt whether he will be able to continue to do so remuneratively at the present market prices. A third very highly esteemed brand is that of Mr. Fisher, of the Perseverance Estate, Singapore. His plantation was started some twenty-five years ago as an essential-oil farm, and covers a very large area, its production in various essential oils, principally nutmeg, citronella, lemon-grass, patchouly, &c., amounting at one time, it is said, to an aggregate of 200 lbs. per day. The European makers always command very much higher prices for their oils than the natives do, and if the former, with their superior facilities, better machinery, and larger capital, cannot make money out of citronella any longer, it is clear that the chance that the native growers can turn out a pure oil at the present prices, are very slight indeed. It is not forty years since citronella was first imported into this country for commercial purposes, and since that time it has become one of the most popular perfumes, and certainly by far the most extensively used in soap-making. In 1864 the exports of citronella oil from Ceylon had already attained the figure of 622,000 oz., in 1872 they were 1,595,000 oz., in 1881 1,761,000 oz., last season 9,508,000 oz., and for the six months which have elapsed of the season now running they have already mounted up to 7,666,000 oz. These figures do not take into account the production from other sources, such as Singapore and Southern India, which would perhaps amount altogether to 15 per cent. of the Ceylon production. It seems certain that the increase in the consumption of the oil cannot have held pace with the production, and stocks must therefore have accumulated to a considerable extent. This is probably the case in America more than here, as most of the citronella oil now takes its way to the States. It is a peculiar circumstance that while lemon-grass oil, which is so closely allied to citronella in its character and the purposes for which it is applied, and which has usually been much more expensive than citronella—its production being very much smaller—was actually dearer than the latter oil in the years between 1881 and 1885. In 1881 or thereabouts the United States first commenced to use citronella oil in very large quantities, and their demand stimulated the production of the oil, which at that time must have been a very profitable article to the cultivators. Between 1858 and 1862 the price of the usual brands of citronella oil ranged from 2½d. to 4½d. per oz.—occasionally a little higher, and that of lemon-grass between 4½d. and 7½d. per oz. At one period during 1863 the prices advanced to 7½d. for citronella and 9d. for lemon-grass, which are the highest quotations on record. This advance greatly stimulated the cultivation of the

grasses. During the last eight years the general range of prices, not counting occasional deviations, has been as follows:—

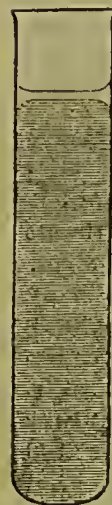
	1880	1881	1882	1883	1884	1885	1886	1887
Citronella	4d.	3d.	2½d.	2½d.	1½d.	1½d.	1½d.	1d.
Lemon-grass	3½d.	2½d.	2½d.	2½d.	1½d.	1½d.	1½d.	1½d.

and, for citronella, still further downwards to its present quotation. There does not seem much prospect of any satisfactory increase in the market value of citronella oil until it has first reached a point so low that some of the native growers shall be absolutely compelled to cease distilling altogether. It might be thought that at present that limit was already reached, but the shipments still continue to grow, and such does not therefore appear to be the case. When once the position has been cleared by the process of eliminating a number of people who now distil the oil, the market may again revert to a fairly satisfactory position for a while, and the European growers be able to obtain fair prices for a good article. It is stated on good authority that there are at present soap-makers in the States who consume over 1½ million ounces of citronella annually, and there is consequently a large enough market for the article if its production is kept within reasonable bounds. It will be to the interest of the Ceylon merchants and exporters to assist in the suppression of the adulteration of citronella; and for this purpose we hope to give further particulars in an early issue regarding the detection of the adulteration by simple means

CHEMICAL "DEAD SPACE."

SOME time ago Professor Oscar Liebreich, the discoverer of the hypnotic properties of chloral hydrate, made another discovery in regard to the properties of that body, which although of much less interest and importance, created at the time not a little attention in the chemical world. In working on the decomposition of chloral hydrate by sodium carbonate in aqueous solutions, he observed that on the surface of the mixed liquids there always remained a clear layer, and it was even noticed that the mixed liquids passed into a capillary tube remained permanently clear. He, therefore, came to the conclusion that (1) in liquids the space of the chemical reaction is limited by a zone in which no reaction takes place, this zone being that portion of the liquid which is in contact with the air; (2) reactions take place more slowly in narrow than in wide tubes; and (3) a capillary space is capable of preventing reaction. To the zone of no reaction he gave the name "dead space" (*totten Raum*). The speculation did not pass unchallenged. Gartenmeister saw no necessity for the theory. The clear zone, he said, is clear because the chloroform resulting from the decomposition of the chemicals evaporates into the air-space above the surface of the liquid, and as soon as this space is saturated with chloroform vapour the clear zone begins to become turbid. This seemed to dispose of the matter; but Professor Liebreich did not give it up. He had had similar experience with the reaction between sulphurous and iodic acids, and to this Gartenmeister's explanation did not apply. He has, accordingly, continued his experiments up to the present, and the results were recently given in a voluminous communication to the Royal Academy of Sciences, Berlin. It embraced an extensive series of experiments with various chemicals, and was freely illustrated with drawings of the tubes, &c., showing the spaces. One of these we reproduce here; it represents the chloral hydrate and sodium carbonate

reaction, and being a typical one, as well as that upon which the controversy is based, is most suitable for general comment.



The conditions are these: When a test-tube of from $\frac{3}{8}$ to $1\frac{1}{8}$ inch in diameter is partially filled with a solution of chloral hydrate and sufficient solution of sodium carbonate added to effect decomposition, but not to fill the tube, and mixed, the mixture slowly becomes milky owing to separation of chloroform, which gradually settles to the bottom of the tube. Meanwhile there is at the surface of the mixture the well-defined clear space which we have referred to, and which is shown in the figure. It is a distinct double-concave meniscus. In highly concentrated solutions the lower concavity is increased, but in no condition, except extreme width of the vessel—for, as explained, the dead space is most noticeable in narrow tubes—does the milkiness involve the meniscus. Even after twenty-four hours, when the whole of the chloroform has apparently settled, the field of

reaction is clearly indicated by the adhering minute drops of chloroform situated under the meniscus, and the liquid above contains undecomposed chloral hydrate and sodium carbonate. The experiments show further that the dead space is best observed in those reactions the product of which is not a crystalline body, and in explanation of it Professor Liebreich advances the theory that it is due to the physical influence of the wall of the test-tube and the tension on the surface of the fluid. He suggests that chemical reactions only take place in a part of the space available. As it is well known that energetic reaction takes place in some capillary surfaces, such as spongy platinum and charcoal, therefore disproving, apparently, his theory regarding capillary tubes, he asserts that in these cases condensation is the predisposing cause of the reaction, so that his dead space is in such cases annihilated. The theory seems, on the whole, a sound one; we know how slow surface reactions sometimes are, and how different physical conditions give different results. At present we have several hypotheses which apply to these cases, but so far the dead space on the surface of a narrow test-tube has not been penetrated, and, although it is not likely to shake the world to its foundation, we can thank Professor Liebreich for his painstaking observations.

THE POSITION OF CREAM OF TARTAR.

FOR some time cream of tartar has ranged lower than has been the case for several years at this period of the season, and it would seem as if the present quotations were worthy of attention. We must, in fact, go back as far as 1878 before we find values as low as those now quoted, to have existed in the same month of the year, the normal value at this season being about 20 per cent. higher. But it should not be forgotten that there is now a far greater competition in the article than was formerly the case; and while many more manufacturers are offering their produce to the consumers, the outlets for the drug, at least so far as the London market is concerned, have not, we should think, increased in the same proportion, although the article is much more widely used now than it was. Formerly a large business was transacted with the United States, through the intermediary of London houses, but that market has been closed to us since the Americans put a duty of 5s. per lb., or from 15 to 20 per cent. of the value, on the article. They now import the argols, and manufacture the cream of tartar in their own country. French cream of tartar remains

the variety which is mostly sold in this country, and until recently it was comparatively free from competition. Spanish cream is also sold; and formerly we received a considerable quantity of Italian refined cream of tartar from Leghorn, Ancona, Venice, &c., this variety being reported the best in the market, and it usually realised about 2s. 6d. per cwt., or thereabouts, above the price of the French cream. Of late years we do not appear to have imported any Italian cream of tartar worth mentioning, though it is said that at least one Italian house again contemplates to compete here; but, on the other hand, German refined cream of tartar, formerly unknown in this country, has lately been introduced here, and an English firm of chemical manufacturers have also commenced to make the article in this country. Both the English and the German cream are sold at a guaranteed percentage of bitartrate of potash, which is not the case with the French, though, perhaps, if the competition should become more severe than it is at present, the French makers will also find it advantageous to guarantee a certain standard of purity, an innovation of which buyers generally would have no reason to complain. The lowest price which has been known for cream of tartar during the present generation was, we understand, in 1852, when crystals of the best quality could be purchased here for 62s. 6d. per cwt., and the highest in 1860, or 1861, when the same quality stood at 152s. 6d. to 155s. per cwt., perhaps on account of the war then proceeding in Italy. From that time the price gradually declined until 1870 and 1871, when it again rose considerably. The following seasons cream of tartar once more pursued a downward course, but from 1880 onward prices have generally been pretty high. We have heard it stated, though we do not know whether it would quite account for the recent fall, that a French bank which came to grief over the copper crash was a very large holder of cream of tartar, and that its stock has been lately disposed of to some extent. The fact that last year at the beginning of the summer the price was about 30 per cent. in excess of what it is at present can scarcely be accounted for, we should think, by over-production, or by the heavy vintage which was gathered in most Continental countries in 1888.

The Scarcity of Tonka Beans. A very unusual circumstance in the drug market, says the *Oil, Paint, and Drug Reporter*, is the almost total absence of supplies of Pará tonquin beans, and this is not only a feature of the New York market but applies to the various European centres of trade. In New York there are probably not more than 1,000 lbs. of genuine Pará beans in the hands of the principal dealers, and these command extremely high prices. The so-called Surinam beans, which are a selected grade of the Pará variety, are also in very small supply. The scarcity is due to the fact that the crop, which is ready to be harvested in October and November, was not gathered last year, because great floods in the producing districts prevented the collection. An effort was made to collect some of the crop after the floods had subsided, but, having been on the ground so long, the beans had germinated, and were worthless. No new beans can now be received in New York until the end of the current year, and in the meantime the meagre supplies on hand will be exhausted. Buyers will, therefore, be compelled to take the Angostura beans, which, though much higher priced than Pará or Surinams, are yet cheap compared with the prices which they realised in former years, before the principal traffic in them passed to the control of a syndicate. The latter, which holds the monopoly of gathering and shipping the Angostura beans to the different European and American markets under a special arrangement with the Brazilian Government, was organised about two years ago. It has fixed prices from which there is no concession, and no orders for less 2,000 lbs. are considered by it. Larger buyers are obliged to pay the same price per lb. as those who purchase a single ton. So far the price of An-

gostura beans has not been affected by the scarcity and high cost of Pará and Surinams, but should there be any considerable demand for the former as a result of the scarcity of the latter the syndicate may advance its quotation. Already there are reports that the current crop of Angosturas, which is gathered in June or July, is to be a short one; but it is rather too early yet to assert this as a fact. In any event there appears to be no danger of a short supply of this variety, as the crop of 1888 was a large one, and a considerable portion of it remains unsold.

* *

A Ten-shilling Stock. The bankruptcy of Mr. Abraham Moore, chemist and druggist, of Wednesbury, is almost, if not quite, unique. This gentleman began life as a surgeon's assistant, but in 1860 he became possessed of 200*l.*, left to him by his father. Therewith he commenced business as a chemist and druggist. He tried two shops in Wednesbury, and then failed, and does not know what dividend was paid. We can form a pretty near guess. Then he filled six different situations as a clerk, but in 1885 tried his luck again as a chemist and druggist in Wednesbury, and has worked the business in three different shops, "his present shop" being given as in Union Street, Wednesbury. But the wonderful thing about Abraham's business is his stock-in-trade. The value of this is estimated at 10*s.*! His assets include also "machinery, trade fixtures, fittings, utensils," &c., valued at a total of 5*l.*; but to allow for possible extravagance in the reckoning, the two items are estimated to produce only 5*l.* 5*s.* If Mr. Abraham Moore could really carry on a chemist and druggist's business with five pounds' worth of fittings and half-a-sovereign's worth of stock, he deserves not only prompt discharge from his present unsatisfactory position, but a handsome testimonial besides, to be given on condition of his telling us all how it is done.

* *

New Facts about Antiseptics. Mr. Alexander Edington, M.B., C.M., assistant to the Professor of Surgery in the Edinburgh University, has just completed the elaborate investigation on the most potent or most used antiseptics, to which we referred some weeks ago, and has communicated his results to the *British Medical Journal*. The paper is of a very complete character, and contains full particulars regarding the methods used in testing bacteriologically the antiseptics referred to. For these details we ask the interested to turn to the original paper, as we must confine ourselves to the results only. The antiseptics used were carbolic acid, corrosive sublimate, and hydronaphthol. The first two are well-known antiseptics, carbolic acid still being the most extensively used in surgery. Hydronaphthol is comparatively new. It has been introduced by Messrs. Seabury & Johnson, and was discovered by Dr. Justus Wolff, of New York. It is a secondary compound of betanaphthol, differing from it by having a molecule of hydrogen displaced by an equivalent of hydroxyl, so that the formula is $C_{10}H_7OH$. It is soluble to the extent of 1 in 1,100 of cold water, more soluble in hot water, in alcohol to the extent of 1 part in 2, and soluble in twenty times its weight of fixed oils. In the comparative experiments aqueous solutions were used, and it should be borne in mind that when greater strengths than 1 of hydronaphthol in 1,100 are spoken of, they refer to mixtures in which there was a portion of the antiseptic undissolved. The experiments numbered about a dozen, the solution being nutrient, with the addition of the antiseptic, in all cases. In the first instance the inoculating material was a mixture of five bacteria, and the hydronaphthol and corrosive sublimate solutions, as weak as 1 in 7,200, succeeded in killing the organisms, but carbolic acid broke down at 1 in 550. Reopening some of the same tubes and adding fresh inoculating matter, it was found that hydronaphthol weaker than 1 in 4,800 was attacked, as was also corrosive sublimate weaker than 1 in 3,600; but, on pushing the test still further, the corrosive sublimate remained as before, while hydronaphthol solutions weaker than 1 in 2,500 broke down. Similar experiments, with the addition of 0.75 per cent. of hydrochloric acid, enabled the carbolic-acid nutrient to withstand the organisms up to 1 in 2,000; otherwise there was no

change. With the same percentage of caustic potash, carbolic acid broke down at 1 in 450, corrosive sublimate at 1 in 700, and hydronaphthol at 1 in 7,200. In regard to the spores of specific organisms (the most difficult to kill), corrosive sublimate and hydronaphthol were only used, carbolic acid having practically no action on these, and again it was found that hydronaphthol was the more potent. Corrosive sublimate (1 in 1,000) allowed the spores of bacillus subtilis to grow abundantly, and hydronaphthol (1 in 1,100) failed only once in eighteen times, while it was absolutely fatal to the spores of bacillus anthracis, whereas corrosive sublimate failed three times. The conclusion is obvious. Mr. Edington, with "pawky" humour, says:—"Corrosive sublimate is undoubtedly useful as a preservative of distilled water, and thus fulfils its functions admirably when used by bacteriologists for moistening the filter-paper in plate-cultivation apparatus; but its use should be restricted to such and like purposes, for even if ordinary water be used instead of distilled, the mercuric salt is soon reduced, as Klein has shown." The great advantage of hydronaphthol is that, while being almost as active a laboratory germicide as corrosive sublimate, under such circumstances as the surgeon meets with, it is much more powerful. Further, as it is non-poisonous, a saturated watery solution of 1 in 1,000 may be freely made use of. Mr. Edington has given 3 grains in one day, and repeated it on three occasions successively, to guinea-pigs without any effect, and has himself taken it without experiencing any result whatever. There can be no doubt of the fact that in this agent we have an ideal antiseptic.

* *

Mitcham Peppermint. During the last eight or nine months we have frequently pointed to the probability of an unusually short crop of essential oil herbs in Mitcham and its neighbourhood for the coming season. During the last week we have taken a look round through the Mitcham district, and as a result of our visit we believe we may confirm the opinions we expressed last year. Taking the peppermint crop, for instance (the most important of the oil herbs), we should say that at the present time it is at least 25 per cent. below the average. So far as we can learn there is not a grower who has not had to plough up (or "ridge up," as it is locally called) some portion of his crop even on land where the plant is considered tolerably good. From our own observations, as well as from that gathered from independent sources, we believe that at present nearly 100 acres of peppermint plant have been so "ridged up," and this acreage will be further augmented during the next two weeks. In many fields where the plant still stands there is only about half an average crop, nor does there seem much of a prospect that this will be mended to any considerable extent. At an early day we hope to be able to visit the outlying Mitcham district, Sutton, Ewell, &c., where a considerable quantity of the plant is also grown, and to report upon the state of affairs in those parts, as well as upon the prospects of the lavender crop, which does not seem likely to turn out so badly as was at one time anticipated.



REJECTED DESIGN FOR MURAL DECORATION AT
17 BLOOMSBURY SQUARE.



MOSES CHARAS AND HIS
PHARMACY.

MOSES CHARAS was one of the most famous of the founders of French pharmacy. He lived at a time when the populace, and the aristocrats too, still believed firmly in the old alchemical faith; but when students and the few thoughtful inquirers into the mysteries of natural science were beginning to question the soundness of the old legends and the old dogmatic teaching. Charas was born at Uzès in 1618. He studied at Montpellier, Orange, and Blois, and then came and established himself at Paris. The especial business which brought him into prominence among the scientific men of the day, and which also gave his pharmacy its principal renown, was his manufacture of the famous theriaca, with its sixty-two ingredients, the marvellous remedy for all manner of diseases, the formula of which was invented by Andromachus, the chief physician to the Emperor Nero, and has been brought down from the Romans to the present day (for it is still included in the French Codex). In the golden days of Arab polypharmacy the formula for theriaca was regarded as the highest expression of the pharmaceutical art, and when Charas first practised pharmacy in Paris, Venice had the monopoly of its manufacture. That city was then the great drug market of the world; there alone, it was thought, could the genuine ingredients be obtained; and the Venetian traders, no doubt, did their level best to maintain this profitable creed. But Moses Charas thought he could make theriaca as well as the Venetian

druggists. He got together all the ingredients—an enterprise of no small magnitude—and he succeeded in inducing a number of magistrates and doctors, including all the Court physicians, to watch him prepare the famous electuary, and to testify to the quality of the drugs and to the accuracy of their manipulation. Charas's shop therefore became the famous depôt for the genuine theriaca, and no doubt all the patriotic aristocrats of the capital came to him for the costly remedy when they wanted it, and many of them would get their prescriptions made up and buy their other physic at the same place.

Charas went deeply into the pharmacy of the theriaca, and, in 1668, published a very learned-looking treatise on it, under the title of "*Traité de la thériaque d'Andromaque avec des raisonnemens et observations nécessaires sur l'élection, la préparation, et la mélange des ingrédients.*" This secured his scientific reputation, and he was soon afterwards appointed demonstrator of chemistry in the Royal gardens.

Though Charas was the first recognised maker of theriaca in France, imitations of the Venetian article had been manufactured in England for at least a century previously, as was shown in an article published in this journal in March, 1880, where was published, indeed, one extract which suggested the possibility of something like it having been made in this country as far back as the days of Alfred the Great. But there were no guarantees of the genuineness of

the English-made article such as those with which Charas had taken care to surround his. The certificate of the faculty seems to have become an institution in France, as may be judged by the following, which is facsimiled from an old circular issued half a century after Charas had retired from the business, and which certainly surpasses in width, breadth, height, and depth of effrontery the boldest efforts of modern quackery.



PROPRIÉTÉ ET USAGES

de la Thériaque.

Ce remède est un préservatif contre le mauvais air, la peste, les poisons, les morsures des bêtes venimeuses & enragées, pris intérieurement & appliqué en forme d'emplâtre sur la partie offensée.

Il est souverain pour la rougeole, la petite vérole, & les fièvres malignes.

Il est excellent dans l'apoplexie, l'épilepsie, la léthargie, la paralysie, les convulsions, rhumatismes, &c. pris intérieurement & appliqué sur les parties débiles & affligées, délayé dans le vin, l'eau-de-vie ou l'esprit de vin.

Il est bon dans les douleurs de tête invétérées & contre les vapeurs; il apaise l'asthme; & il est spécifique pour les syncopes & les défaillances de cœur.

Il est fort propre contre les vomissements, les faiblesses & les dévoiements de l'estomac & des intestins, contre la diarrhée, la lienterie, la dysenterie, le colerambus, & contre toutes fortes de coliques.

Il tue les vers, il excite la sueur; & il arrête le trop grand effet des purgatifs.

Il provoque les ordinaires, guérit la jaunisse & les pâles couleurs; il facilite l'accouchement des femmes, & pousse au dehors ce qui les peut incommoder.

On s'en sert heureusement dans les fièvres intermittentes, particulièrement dans la quarte, pris à l'entrée du frisson, & appliqué sur les poignets & sous la plante des pieds.

C'est un excellent vulnéraire dissous dans le vin, l'eau-de-vie ou l'esprit de

vin; il arrête la gangrene, &c. Il guérit aussi les bubons, charbons, cloux, antrax, &c. appliqué dessus.

On le prend seul à la pointe du couteau ou enveloppé dans du pain à chanter, bûvant un peu de vin ou du bouillon par dessus, ou étant délaïé dans le vin ou dans quelque pitifanne ou eau cordiale.

La dose ordinaire est: aux petits enfans depuis douze grains jusqu'à vingt: aux moyens depuis vingt jusqu'à trente: aux grandes personnes, depuis une demie dragme jusqu'à une dragme, & même jusqu'à deux dragmes aux personnes robustes, & en des occasions pressantes.

On le donne aussi avec succès dans les maladies des animaux.

NOUS Souffignés Doyens, Professeurs en Pharmacie, & Docteurs Regens de la Faculté de Médecine en l'Université de Paris, députés par ladite Faculté pour assister à la préparation de la Thériaque que les Maîtres Apoticaire de Paris ont fait en leur Jardin: Certifions que toutes les Drogues belles & bien choisies ont été fidelement pesées & artivement mêlées en présence des Magistrats, & sous nos yeux, & qu'après les avoir laissés fermenter pendant une année, nous nous sommes transportés une seconde fois dans la Salle de leur Jardin, où nous ayant ouvert, en présence des mêmes Magistrats, le vaisseau dans lequel ladite Thériaque avoit été renfermée, nous l'avons trouvée de la couleur, consistance & odeur requises, c'est-à-dire dans la perfection, & lui avons accordé notre approbation; en foy de quoi nous avons signé le présent Certificat, A Paris ce 25 Octobre 1731.

H. T. BARON Doyen.

P. AFFORTY Professeur en Pharmacie. RENEAUME.

CARON Ancien Doyen. FINOT Professeur en Pharmacie.

LALEU Professeur. BAILLY. MILLET.

Charas's old pharmacy existed in Paris in the Rue des Boucheries Saint-Germain until about the year 1825, bearing over the entrance the old sign of the golden vipers—"Aux Vipères d'Or." But its character had changed from the old days when Moses was the Court pharmacien. In modern days it had become a herbalist's store; but in the drawings which accompany this article we have represented a reproduction of the old shop, which was planned by very competent artists and exhibited in Paris last year by M. Louis Bourne, the director of *Le Travail*. The exterior of the shop, as it existed two hundred years ago, was garlanded with bundles of herbs and roots, and the interior was arranged in a manner to most effectively strike reverence, if not terror, into the souls of the customers. The apparatus



displayed—the furnace, the mortars of metal, of stone, of marble, of porphyry and agate; the stork, the alligator, and the vipers; the fantastic labels, and the studied wizardly look of the proprietor himself were all parts of the ultimate purpose, which, however, it is fair to add, was not peculiar to Charas or his day, but may be regarded as the one invariable feature of pharmacy, ancient and modern, high-class and low-class—the design of making money.

Most of the old alchemists were honestly cracked; these early druggists, who bridged over the period between the days of Arab superstition and modern chemistry, were about the rankest old charlatans the world has ever seen. They made splendid fortunes; and they made them by imposing on the public a belief in their semi-magic powers.

We do not know whether Charas was avaricious or not; any way, he must have been a laborious worker. Carrying on his professorship and his pharmacy, he at the same time made studies more or less profound in regard to his favourite theriaca. The most important constituent of this electuary was the viper cakes, "trochisci viperinum." Theriaca was first intended as an antidote to the bites of venomous serpents; its name was derived from the Greek *therion*, a viper, and the ancient idea corresponded to some extent with that of Hippocrates and Hahnemann, that like cures like.

According to Andromachus and his immediate successors the viper cakes were to be made by first whipping the vipers, so as to irritate them and drive all their venom to their extremities; their heads and tails were then cut off, and their bodies boiled till the flesh came away from the bones; the boiled mass was then dried and made up into cakes with one-fifth of its weight of biscuit-bread. Charas argued at great length against this process. He preferred to grind up the whole of the viper; he objected to the boiling because, he said, "all the best part of their juice and virtue must go into the broth;" he objected to the dilution with biscuit-bread; and he was sure that if Andromachus had lived in his day, and had understood as much about vipers as he (Moses), the Master (Andromachus) would have very readily yielded to the arguments of his far-distant disciple.

Charas published soon after his first work a treatise on "New Experiments on Vipers," and in 1676 a Royal Pharmacopœia, galenical and chemical—a great work, and one which became enormously popular. It was translated into all the principal European languages, and even, it is said, into Chinese.

But adversity was to shadow the old pharmacist's declining days. Charas was a Protestant, and the revocation of the Edict of Nantes in 1678 drove him into exile. He spent five years in England, where he practised as a physician under the direct protection of Charles II. On the death of that king he removed to Holland, and became one of the most famous physicians of the city of Amsterdam. But, unhappily, the Spanish ambassador induced him to visit Madrid to give his professional services to his majesty of Spain. Charas went with no little reluctance, for he was still a Protestant, and he dreaded the Inquisition. But he was successful in the treatment of his royal patient, and all might have ended well if the old viper-experimenter had not been stirred on the point which interested him most keenly. A very holy Archbishop of Toledo died, and was canonised. His successor, in order to secure the popular favour, declared that the holiness of the late saint had had the effect of destroying the venom of all the snakes in his diocese. Moses Charas could not stand that. He got two chickens and a viper, and caused the reptile to bite the fowls, which both died immediately. This inconvenient demonstration was in turn too much for the ecclesiastics; Charas was arrested and imprisoned; his trial was continued at intervals for nearly six months. At first he was obdurate, and defended himself with talent and courage, but when at last the rack was threatened, the old man, now seventy years of age, yielded and abjured. He was set at liberty, and, with his wife, returned to France, re-establishing himself in his old pharmacy of the Golden Vipers, which had been conducted by his son during his absence, the younger Charas having adopted the Catholic faith with promptitude when he saw that his prosperity depended upon his creed. The king, Louis XIV., received his old professor with cordiality. He was made a member of the Academy of Sciences, and during the remainder of his life contributed many papers to that body. Again he returned to the study of his beloved vipers. He

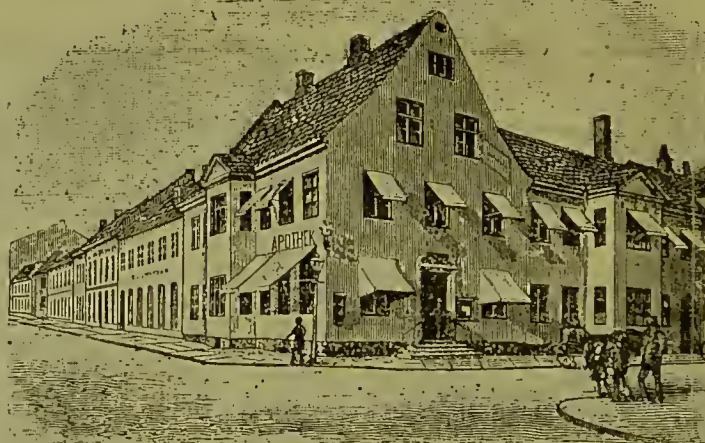
sublimed their bodies, and produced an ammoniacal salt, which, doubtless, did possess to a certain extent the virtue he attributed to it of being an application of value in neutralising the venom of a bite; at all events, no superior remedy has been discovered up to the present day.

AN HISTORIC NORWEGIAN PHARMACY.

THE Swan Pharmacy in Christiania is the oldest chemist's business in the Norwegian capital, if not in the kingdom of Norway, and its proprietor recently, when the business had been in existence for 200 years in the house which it now occupies, commemorated the occasion by the publication of a pamphlet in which the history of the business and of its various proprietors is described at length.

A copy of this "Kristiania Svaneapotheks Historie," as the booklet is called, was sent by the proprietor of the business (Mr. W. F. W. Eckell) to THE CHEMIST AND DRUGGIST, a journal of which he is a regular reader, and from it we extract the following particulars regarding this famous establishment, which deservedly occupies a place in the list of the world's "historic pharmacies":—

Between February 15, 1628, when the business now under Mr. Eckell's control opened its doors, and the present time, eighteen pharmacists have directed its fortunes with varying, though generally favourable, results. The fact is dwelt upon with considerable pride that, without a single exception, all these eighteen men were trained pharmacists—"uddannede Farmaceuter"—which is quite an unparalleled circumstance in Norway, or indeed in most other countries. Bergen, the rival of Christiania, and which, perhaps, outdistances that capital in commercial importance, started its first pharmacy as far back as 1588, forty years before Baltzer Brabandt first took to vending drugs in the capital. But the original Bergen chemist was not a chemist at all in the proper sense of the term, but a general merchant, without any special knowledge of drugs. Fortunately for him, no pharmacy law existed at that time.



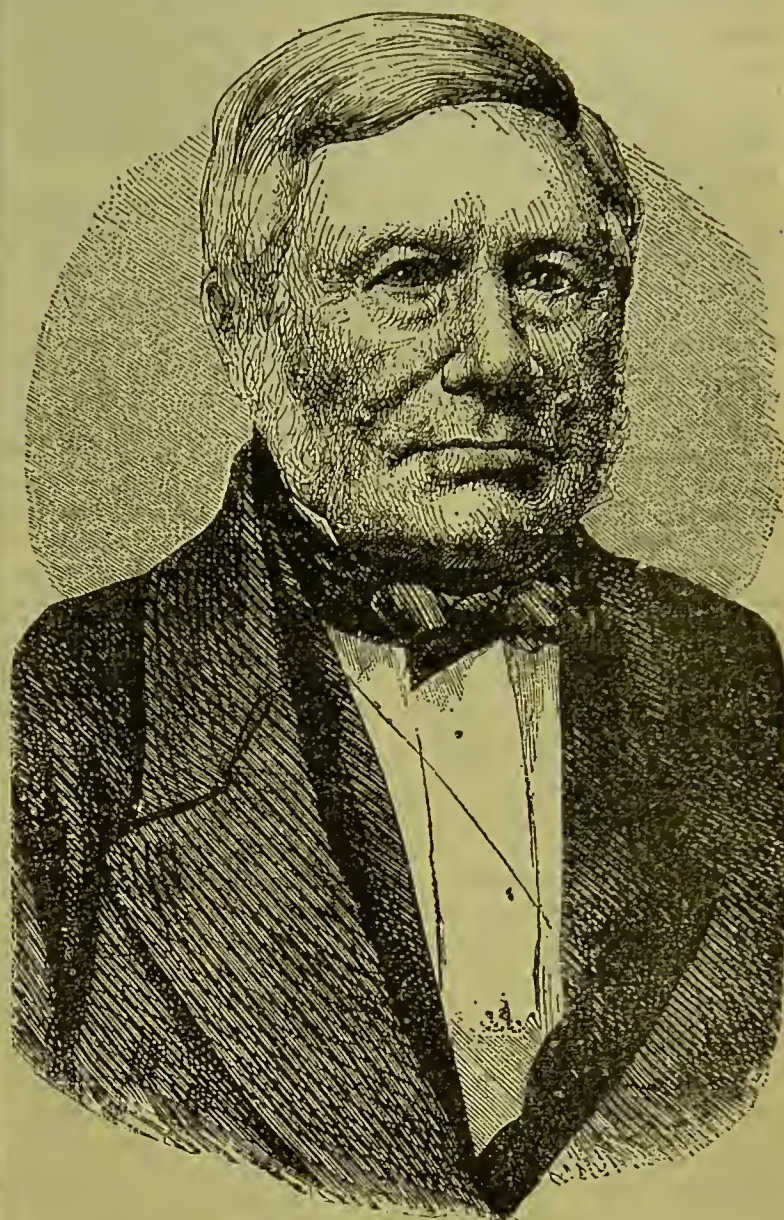
Baltzer Brabandt, the original founder of what is now the Swan pharmacy, hailed from Kolding, in Denmark, where he acted as manager to the pharmacy of his mother-in-law. Whether he disagreed with that relative, as people are said to be apt to do, or otherwise was found wanting in respect to the constituted authorities, the chronicles do not report; but it is certain that in the beginning of 1628 Balthasar was compelled to make a more hasty than dignified exit from Kolding, and hid himself to Christiania, where he obtained permission to establish a pharmacy, and carry it on, in the words of the licence, "until such time as he shall be able to again take up his former profession in Kolding, from which place he has been expelled without notice or without any funds."

A few years later a licence was also given to this trained pharmacist to add a wine cellar, or, not to put too fine a point upon it, a public-house, to his business, and both concerns appear to have flourished exceedingly. He subsequently returned to Kolding, where he died, full of honours, in 1644, and was "begravedes i kirken"—buried in the kirk. The Christiania business passed into the hands of Thomas Stenger,

to whom, by charter of King Christian IV., freedom of all royal and municipal taxes and dues was granted. But Stenger does not appear to have inherited his predecessor's business capacity, as it would seem that steps had ultimately to be taken by the authorities to deprive him of his business, which he neglected. These steps, with characteristic "cussedness," Stenger frustrated by dying at the right moment—for himself—in 1647. Anthoni Piper, the next proprietor, had a short-lived reign, being cut down by the plague of 1654, when over 1,000 people—then a large moiety of the population—died from the same cause in Christiania. His successor, Adolf Geissler, also succumbed to that disease in the same year; but the next licence-holder, Philip Moth, had a long and prosperous innings. He became famous among his fellow citizens for having, in 1656, when preparations were being made for a triumphal entry of a royal prince into the town, and it was found that vegetables for the royal table were lacking, supplied a quantity of seed to the town, which germinated and grew up in time to provide the necessary dishes for the feast. This exploit was remembered to Moth's credit, until, fourteen years later, he exchanged the chrysalis for another state, when he was buried "med alle klokker"—musical honours, in fact. Hans Joakim Scharff, the next link in the cycle, affords a practical example of the folly of sitting on two stools and falling to the ground between them. The position of postmaster in Christiania became vacant just after he had assumed the directorship of the Swan pharmacy, and he promptly relinquished pharmacy for the postal service. But two years afterwards an alteration in the postal arrangements deprived him of his berth, the pharmacy in the meantime had acquired another tenant, and poor Joakim was left out in the cold. A licence was afterwards given him to establish a second pharmacy, either in Christiania or in Brogernaes, at his option, and he is said to have founded the "Elephantapothek" in Christiania. After having changed hands twice more, the Swan pharmacy passed into the possession of Johannes Heerfort, son of the Court apothecary in Copenhagen, and subsequently himself the successor to his father's position. Heerfort was a distinguished member of the upper crust of Copenhagen society, and it is recorded that the principal men in that city were glad to stand godfather to his children. In 1689 Heerfort purchased for 1,500 riksdaler the house in the Toldbodgad, in Christiania, which is now the pharmacy shown in the sketch above. He then acquired the licence of the old pharmacy, and transferred it to this house, paying 2,952 riksdaler for the household effects, stock, and goodwill of the business. The stock item came to 626 riksdaler. Heerfort left the business to his daughter, who married the manager, and under his care, and that of his immediate predecessors, the business appears to have made considerable strides. Under the management of the three next following proprietors the business further increased in importance, and when, in 1813, Frants Peckel purchased it he had to pay a very heavy sum for the concern. One of Peckel's assistants, Peter Möller, who subsequently became himself the proprietor, was one of the foremost pharmacists of his day, not only in Norway, but of the world, and his name will for ever rank high among the profession as the inventor of the process of refining cod-liver oil by means of the application of steam. Peter Möller as a scientist and a man of business stands out so prominent among the long array of pharmacists who have held sway in the Svaneapothek that we thought it desirable to procure some particulars concerning this remarkable man, and these details have been courteously furnished to us by his son Frants Peckel Möller, who was also for some time a proprietor of the business.

Peter Möller was born on April 26, 1793, at Röros, an inland town in Norway, known alike for the richness of its copper mines and the excessive coldness of its climate in winter time. The inhabitants of Röros generally attain old age, simply because the rigour of the temperature is fatal to any but strong and healthy children. Peter Möller also grew up a robust young man; and when he had finished his schooling in his native town, where his father, Joccum Möller, held an official position in connection with the mines, being of an ambitious turn of mind, he left Röros in 1809 to seek his fortune in Kristiansund, south of Throndhjem, where he was apprenticed to an apothecary. Kristiansund is a seaport, in the vicinity of which cod-fishing is carried

on rather largely during the winter season, and here young Möller gained his first knowledge of that business with which his name afterwards became so intimately connected. After having served his apprenticeship here he went to



Throndhjem in 1814 as a chemist's assistant. In Norway all chemists are appointed by the Government and subject to special regulations, which are balanced by certain privileges. One of these privileges granted to Peter Möller's principal in Throndhjem was to establish a branch at Lofoten during the cod-fishing season there. Between 1814 and 1819 Peter Möller was sent to Lofoten every year to manage this branch establishment, and became acquainted with the crude methods there in vogue for producing cod-liver oil. From Throndhjem Peter Möller went to the University of Christiania to study for his final examinations, which he passed with honours in 1822. He then became manager to the Svaneapothek for the widow of Frants Peckel, and from her he purchased the business in 1829 for the sum of 20,000 specie thaler, or about 4,500*l*. Thenceforward he gradually became a prominent citizen, holding such public appointments as examiner in pharmacy and commissioner of patents. He was also one of the three scientists to whom the editing of the first *Pharmacopœia Norvegica* (1854) was confided—a work which was so much in advance of its time that the later editions of the Danish, Swedish, and even to some extent the German, *Pharmacopœias* have been modelled on its principles. Peter Möller also established several manufacturing establishments, such as an oil mill, soap works, a cotton mill, &c. The idea also suggested itself to him of improving the manufacture of cod-liver oil, doing away with the primitive and sometimes disgusting method with which he had become acquainted during his sojourn at Kristiansund and Lofoten. In 1852 Peter Möller erected his first small factory in the neighbourhood of Aalesund, not far from Christiansund. Unselfish in his aims, he disdained to secure patent rights,

but freely communicated his invention as widely as possible. Its success may be gathered from the fact that in 1855, three years after the opening of Möller's experimental factory, there were already twenty-one factories. In 1860 there were forty-five, in 1865 seventy, and in 1880 ninety-six factories. After the great failure of the fishery in 1833, when cod-liver oil rose in price to six times its ordinary value, factories were established in nearly every nook and corner along the coast, and their number is now upwards of two hundred. The production rose from twenty barrels in 1852, when Peter Möller's first oil found buyers with difficulty, to over 20,000 barrels in 1888.

The increasing demand for the oil necessitated the removal of the factory to the larger fisheries in Lofoten (1878) and the establishing of a branch office in London in 1867, the management of which his son, Dr. F. Peckel Möller, undertook. Peter Möller gradually dropped his interest in all his other enterprises, and concentrated his whole energy on carrying forward and improving his cod-liver oil factories. For the development of this business no personal sacrifice seemed to him too great. Every winter, when others sought the fireside and the bosom of the family, old Peter Möller started for his journey to the Arctic regions, cheerfully encountering cold and gloom, and toiling early and late amid untold hardships and privations. Such a journey thirty or forty years ago, when modern conveniences of travel were unknown in those latitudes, was well calculated to deter younger and stronger men. But even in the last winter of his life Peter Möller did not shrink from undertaking his annual expedition. He died at Christiania on November 27, 1869, 76 years of age. Peter Möller was a corresponding member of the Paris Pharmaceutical Society, an honorary member of the Royal Philosophical Society of Thronhjelm and the Medical Society of Stockholm, and a Knight of the Swedish Orders of Vasa and St. Olaf.

After his death the cod-liver oil business went to his son-in-law, T. Heyerdahl, a commodore in the Norwegian navy, who for some time had been an active partner, and his son, Dr. F. P. Möller, who continued the management of the London branch. On the decease of the commodore in 1880 Dr. Möller left the London branch in the hands of Mr. W. Fallon, and assumed the management of the chief office in Christiania, which he still continues, at the same time superintending the factories in Lofoten and Finnmark. The pharmacy for which he obtained the licence after his father's death he sold in 1871 to its present proprietor (Mr. W. F. W. Eckell) for 180,000 kroner (about 10,000*l.*). The latter gentleman was a pharmacist and manufacturer of malt extract in another place in Norway, and this manufacture is now carried on on a very large scale in connection with the Swan pharmacy, Mr. Eckell's goods being well known on the Continent and in this country.

NEW COMPANY.

THE MEDICAL BATTERY COMPANY (LIMITED).—Capital, 100,000*l.*, in 5*l.* shares. Object, to acquire the business, goodwill, rights, privileges, contracts, copyrights, trade marks, patents, assets, and property of whatever class now possessed by the Medical Battery Company (Limited), and to carry out an agreement made between C. B. Harness, the liquidator thereof, and H. C. R. Sharman, trustee for the new company. The first subscribers are:—Major C. G. Elers, Crewkerne; W. de Lorne, 34 Sidney Road, Stockwell; C. B. Harness, Potter's Bar; E. Crick, Montrose Road, Putney; A. Fleet, 39 Hatton Garden, E.C.; G. Wills, Crewkerne; R. Moffatt, Northumberland Park. The number of directors shall not be less than three nor more than seven. The first are the present directors of the Medical Battery Company (Limited); C. B. Harness is appointed managing director; remuneration, 1,000*l.* per annum. The directors, including the managing director, are to receive 5 per cent. on the net divided profits, to be divided as they determine.

THE Vienna Medical School remains a favourite finishing place with English-speaking students. Last winter 150 American and British (including a large number from Edinburgh) graduates attended the school.

ACONITE AND ACONITINE.

AT one of the meetings of the Chemists' Assistants' Association during the session which has just come to an end a very elaborate paper was read by Mr. Edwin Richards, F.I.C., and Mr. F. Ashley Rogers on "The Microscope in its Application to Pharmacy." The paper was illustrated by about forty microscopic slides exhibited by means of the magic lantern, and was warmly appreciated by those present, amongst whom, in addition to the ordinary members, were Messrs. W. Martindale and A. H. Mason. The most generally interesting part of the paper, of which we have received a copy from the authors, is on aconite root and crystallised aconitine, and, as the authors appear to have devoted both excellent skill and much time to this important subject, we give in our own words the main facts of their research, adding, where necessary, other details bearing upon the subject.

The attention which has been devoted to aconite root for some years has helped to accentuate the difficulties which experimental chemists have met with in the isolation of its active constituents. There have been many reports on this subject published during the past five-and-twenty years, and some of these have contradicted each other so much that, recognising the ability of the workers, we are forced to the conclusion that they must have been working on different materials passing under the same commercial name. One of the last papers read by the late Mr. John Williams was on the preparation of aconitine, and in it he remarked:—"The first difficulty is with regard to the aconite root, which should be carefully chosen, and, if possible, the root verified botanically as that of *Aconitum Napellus*. We have now every reason to believe that other species of aconite, although yielding alkaloids, some of them probably of great medicinal importance, do not yield alkaloids identical with that obtained



CHELSEA GARDENS.

MR. HEATH'S
CULTIVATION.

MR. RANSON'S
CULTIVATION.

ACONITUM NAPELLUS.

from *A. Napellus*." This is an expression of opinion which has received ample verification since it was uttered, and the necessity for greater care in selecting our supply of medicinal aconite root is now receiving practical attention (see THE

CHEMIST AND DRUGGIST, March 2, p. 301). English and German aconite root are recognised by the British Pharmacopœia. English root can scarcely be called a commercial article: it is cultivated by few, and mainly for their own use. The German root is that upon which we have mainly to rely for medicinal purposes; it is of variable quality, often a mixture of the roots of different species of aconitum, and frequently unsound. It is interesting to contrast the external appearances of these roots, and we give here figures drawn from specimens grown in England by Mr. Ransom at Hitchin, by Mr. Heath at Wandsworth, and at the Chelsea Gardens of the Apothecaries' Society. We also show a drawing of a root picked from a parcel of German aconite. This has been identified by Mr. Baker, F.R.S., as an undoubted *A. Napellus* root. The external conformation of these roots shows remarkable differences in detail, and it is not unreasonable to suppose that these physical differences may be the cause of differences in the organic constituents. As to the internal appearance of the roots the authors give the following descriptions:—

English Root.

A brown-walled periderm, next to which comes a layer composed of about twelve rows of muriform parenchymatous tissue, containing yellowish stone cells sparingly interspersed.

The next zone, which extends to the cambium layer, consists of loose parenchymatous tissue, in the inner half of which the tissue of the medullary and bast rays is seen, with a dotted appearance caused by the sieve bundles.

A narrow cambium layer comes next, enclosing a large-celled pith in the angles of the cambium layer pushed outwards.

At from four points in the tip to seven points near the crown of the root are the fibro-vascular bundles, the average number of which is six in a mature root, forming with the cambium layer a figure varying from an almost perfect hexagon to a star.

Japanese aconite root is extensively used, perhaps not for making tincture, but certainly for making liniment of aconite—that is, when it is available, for the supply is erratic. The appearance of the root, as shown by the figure, is very dif-

German Root.

A brown-walled periderm, next to which comes a ring composed of about fifteen rows consisting of tangential stretched dotted cells. It contains yellowish stone cells sparingly interspersed.

The middle ring is separated from the inner by a kind of kernel sheath, consisting outwards of tangential stretched parenchyma cells, further inwards changing into the tissue of the medullary and bast rays.

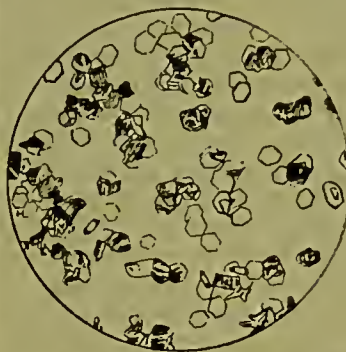
The pith (rather large-celled) is enclosed by a cambium layer of many rows.

Five to seven vascular bundles lying in the points of the five to seven ray-like distended pith form the woody portion.

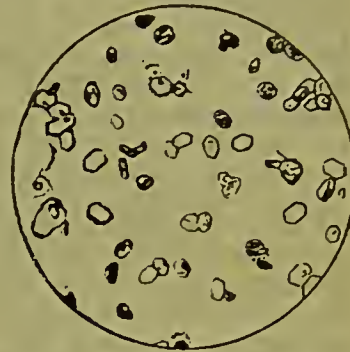
portions of the root. It would seem, therefore, that aconitine only exists in the fibro-vascular bundles, cambium layer, and sieve bundles of the root.

Passing now to the microscopy of aconitine it may be stated at the outset that Messrs. Richards and Rogers have taken up the subject where the late Mr. John Williams left off. It will be remembered that Mr. Williams, in his second article on the subject, gave a very simple process for the manufacture of crystallised aconitine. It consisted of exhausting the dried aconite root with amylic alcohol, washing out the alkaloid from the amylic solution with dilute sulphuric acid and water, precipitating the aconitine from the acid solution by means of sodium carbonate, then recrystallising from absolute ether or alcohol. The authors had some of the aconitine made by Mr. Williams, and compared it with the alkaloid obtained from one of the English-grown roots to which reference has been made. Crystallised aconitine was also made from German root, and all were mounted on slides as ether and alcohol crystallisations. The crystalline forms of the whole were found to be identical. We reproduce one of the slides of this Nap-aconitine. The form was in all

English.

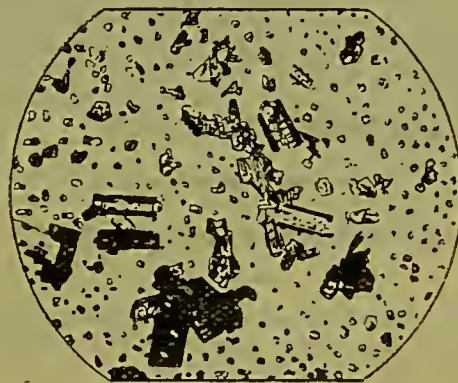


German.



NAP-ACONITE FROM ENGLISH AND GERMAN ROOTS.

cases so distinctive that the authors declare it to be the best and most characteristic test for the true alkaloid; the crystals, they say, are invariably hexahedral, thin flat prisms with pointed ends. Hitherto the crystals of Nap-aconitine have been stated, on the authority of Wright and Luff, to be hexagonal or rhombic; but this is an error. They are distinctly oblong, hence hexahedral, and the presence of rhombic crystals in Nap-aconitine at once suggests admixture with some other alkaloid, most probably Jap-aconitine. Our figure of the microscopic appearance of this alkaloid shows



JAP-ACONITINE.

that it takes the form of long columnal crystals, almost a parallelogram, and these could not be mistaken for the beautiful hexahedron of Nap-aconitine. The authors also failed to get a crystalline alkaloid from the root of *Aconitum Perov.*

In Mr. Williams's paper reference was made to the manufacture of amorphous aconitine of the British Pharmacopœia from the crystalline variety. This was done by dissolving the crystals in weak sulphuric acid and precipitating with solution of ammonia. The amorphous product is really a hydrate, and the curious point about it is that it cannot again be crystallised. The same applies to the alkaloid treated with weak nitric acid. From the solution we can get beautiful crystals of aconitine nitrate, but when we attempt to get aconitine from this, we get an alkaloid which has the appearance shown on the next page. Messrs. Richards and Rogers have made numerous experiments in this direction, but have utterly failed to extract



JAPANESE ACONITE.



GERMAN ACONITE.

ferent from that of *A. Napellus* root. Sections of this root show an arrangement of the fibro-vascular bundles different from that occurring in *A. Napellus* root; they also are more numerous than in the latter, and there is but one zone outside the cambium layer, which is a marked contrast to the German and English roots, in which there are two zones.

A suggestive part of the paper referred to the situation of the aconitine in the root. In this case the authors applied the reagents to sections of the fresh root. Mayer's solution produced a coloration varying from yellow to dark brown in the cambium layer and fibro-vascular bundles, and also to a less extent in the sieve bundles, the other portions of the root remaining unaffected. Phosphomolybdate of soda solution also produced a characteristic coloration in exactly the same

crystals from the official amorphous aconitine, or from salts of aconitine. We are almost tempted to scepticism here, and chiefly because in the course of the manufacture of crystallised aconitine it is converted into a salt, which is afterwards split



NITRATE OF ACONITINE. ACONITINE FROM THE NITRATE.

up with an alkali and crystallised. However, we leave aconitine authorities to explain this apparent contradiction. It may be that mere conversion into a salt does not prevent crystallisation, but that crystallisation prevents subsequent crystallisation. The paper included a communication from Mr. T. B. Groves confirmatory of the author's observations, that Nap-aconitine obtained direct from the root can always be distinguished from any other by its characteristic shape, and that the apparent action of nitric acid upon the alkaloid seems to make the medicinal value of the nitrate doubtful.

It is here that we require some light from the physiological side. Chemical tests suggest; physiological experiments prove—or ought to. In this connection we may refer to an interesting paper by Mr. F. A. Thompson, which appears in the last issue of the *Druggists' Bulletin*. He has been testing commercial aconitines by Squibb's physiological method, which consists of placing a fluid drachm of a dilution of the drug in the anterior portion of the mouth, previously rinsed with water, and holding it there for one minute, then rejecting and again rinsing the mouth. A tenth of a minim of a 1-in-1 fluid extract should in this way produce a distinct aconite sensation, not amounting to tingling, but very suggestive of it, and continuing for a quarter or half an hour in greater or less degree. This is taken as the standard in any comparative tests. In this way Mr. Thompson tested two samples of Gehe & Co.'s amorphous aconitine and one of their crystallised alkaloid, a sample of Duquesnel's crystallised aconitine, and a sample of Merck's crystallised aconitine. The result was that one sample of the amorphous alkaloid was found to be 45 times stronger than the standard, the other 90 times stronger; Duquesnel's sample was 300 times stronger, Merck's 350 times, and Gehe's crystals 480 times stronger than the standard. The solutions used varied in strength from 1 in 25,000 to 1 in 275,000.

THE CHEMIST AS HUMBUG.

THE struggle for existence among the Sunday papers is extracting from them whatever cleverness their staff possesses, or at any rate spreading it out so that a little has to go a long way. One of them, called the *Unpique*, thinks fit to publish a series of imaginary interviews with the humbugs of society, and is good enough to include "the chemist and druggist" (the trade, not the journal) in this category. This is how the supposed interview is reported:—

"You ask me to tell you something of the humbug of the chemist and druggist, but don't you mean rather the humbug that lies in the much-vaunted virtues of the medicines or 'cure-alls' he sells?" asks the M.P.S.

"I include both the humbug of the man and the humbug of his wares, so if you tell me something of each I shall be glad."

"Well, the chief trickery is in the made-up compounds, sold literally on false pretences to an ignorant and probably prejudiced public. A few instances? Certainly. Just the minute before you came in a woman came in for a pennyworth of castor-oil pills, because castor oil was 'so mild and safe.' Now, as a matter of fact, there is not a drop of castor oil in a hundredweight of these."

"What is the active ingredient, then?"

"Calomel, or, in other words, mercury."

"But is not this indiscriminate taking of mercury very hurtful?"

"Most assuredly it is, and I have known it to cause untold misery; but the people want castor-oil pills and —"

"Don't get them," I interrupted.

"Well, for the matter of that, there are a good many things they don't get when they ask for them. For instance, olive oil is cotton-seed oil in the majority of cases, powdered rhubarb and syrup of the same root are not always what they seem, whilst some tinctures are, by some chemists, made from methylated spirits instead of spirits of wine. Laudanum is extensively sophisticated, and the popular sweet spirits of nitre is often composed in a way little thought of by the compilers of the British Pharmacopœia. But what would you have? The public have got a craze for cheap stuff, and they have only themselves to blame for what they are served with. Where the humbug comes in is mainly at the cheap advertising chemists'. They advertise certain drugs for sale retail at less prices than I can buy them wholesale, and of course the public are robbed, and, what is more, they seem to like it. There is a man I know who sells more cream of tartar in a week than I sell in six months, and in every pound he wraps up there is not more than 25 per cent. of the genuine article, yet the buyers go again and again. The great B. P. is nothing if not gulled, and if A does not do it, B and C will; therefore A, if he is wise and anxious to keep out of the Bankruptcy Court, will join in the swim. That reminds me of an anecdote—and a true one, mind—of a tradesman, not a chemist though, who put down the cause of his insolvency to 'honesty.' Not bad, was it? And very possibly it was correct."

"You have told me something of the chemist's humbug as shown in what he sells; can you tell me something now of his humbugging in *propria personâ*?"

"Certainly; but first let me say a word about quack medicines, though the retailer is, of course, not responsible for their sins. A few, of course, are really good, and deserve their reputation, but others are frauds pure and simple. A man pays 9½d. for a box of pills with a Government stamp on that he could buy loose for 2d. over the counter. The basis of nine-tenths of the pills is aloes, and sometimes a little colocynth or gamboge is added, together with some carminative that will prevent pain. The blood mixtures are composed of iodide of potassium and sarsaparilla, and may be bought for a tenth of the price charged for the patent medicine. Quinine tonics often contain quassia in place of quinine—a saving of 95 per cent., whilst other tonics are made up of hops, gentian, &c. But why continue? Enough is as good as a feast. Now for the other part of my subject. A chemist is often looked on by the lower middle classes and the poor as something of a physician, and he, if he be in a middle-class neighbourhood, will often make more money by prescribing than the fully-qualified practitioner round the corner. True, he does not often go out visiting patients, but this is chiefly owing to the fact that when a patient is so ill as to require visiting at home, there is sure to be a certain amount of risk attending it. If the patient happened to die there would be a rumpus, and possibly an inquest, because the chemist could not give a death certificate. A prosecution for illegally practising as a surgeon might also follow, and that would be awkward, to say the least of it. Of course he is acting illegally by prescribing at all, even at his own shop, but still, as it is a very paying game, he is willing to run the risk on account of the profits he can make. And then, again, there is often a great indisposition on the part of anyone to make a move in the direction of a prosecution. Any doctor in the neighbourhood who dared to do it would inevitably be ruined, as the public would put it down to professional jealousy, and say the doctor knew that the chemist was the better man, as, in fact, he sometimes is, and was in consequence afraid of him."

"But doctors often dispense their own medicines, don't they, and so take business out of the chemists' hands?"

"They do, and though some—those, for instance, who are licentiates of one of the Apothecaries' Companies—are legally entitled to do so, there are many more who are not. It is, after all, only a case of tit for tat, and I don't think the chemist is very greatly to be blamed."

"But chemists do not receive any strictly medical training, do they?"

"No, but by the constant dispensing of medicines they get hold of certain formulæ for certain diseases, and work on them according to their light."

"Rather a risky business after all," I remark.

"Well, that is a matter of opinion. I do it—we all do it more or less—the ordinary chemist more, the fashionable chemist less. The latter has, however, the less need to do it, as he can charge heavily for his dispensing. Eightpence and two shillings for an 8-oz. bottle of medicine will leave on the average, taking one prescription with the other, a profit of 500 to 700 per cent. The ordinary middle-class chemist has to be content with eightpence to a shilling a bottle."

"And that leaves a big profit, too, doesn't it?"

"Yes, pretty fair, as things go."

And, "as things go," I think I have shown that I am justified in giving the chemist and druggist a place in my gallery of Humbugs of Society.

NOTES ON PODOPHYLLIN.

By H. W. JONES, F.C.S.

COMMERCIAL samples of podophyllin, as is too well known, differ greatly in colour, solubility, and amount of ash, and also give tinctures of very varying appearance, to say nothing of therapeutic activity.

Of a number of samples examined by the writer four may be selected as types of what may be met with:—

—	1	2	3	4
Matter insol. in rectified spirit	2.1	2.2	42.5	Quite soluble
Chloroformic extract (washed with petroleum ether) ..	50.2	48.1	23.1	51.6
Ash	1.2	1.1	20.1	0.2

No. 1, a fairly good specimen, of a bright yellow colour, active, medicinally, but falling short in the important matter of solubility. No. 2, a sample of good appearance and resembling No. 1, but somewhat deficient in chloroformic extract. No. 3, a distinct discredit to its maker. No. 4, typically pure podophyllin.

B.P. PROCESS.

The B.P. allows resin of podophyllum to vary in colour "from pale yellow to deep orange-brown," and practically the colour has little to do with the matter, providing the resin is in all other respects satisfactory. Shortly stated, the conditions producing such different results are, (1) the length of time the spirituous solution has been treated during the recovery of the bulk of the spirit; (2) and the heat employed in drying the final product. The B.P. article is required to be "soluble in rectified spirit and ammonia," and the official process gives a product answering completely these tests. The process, however, is worked with considerable difficulty, as the bulk of the precipitated resin remains suspended in the liquid and clogs up the filter when filtration is attempted.

THE PROCESS OF B.P. 1867.

This resembled the method given in the present U.S.P., inasmuch as it allowed the use of hydrochloric acid. But whilst the U.S.P. directs acidulation to the extent of 1 volume of acid to 100 volumes of water, the process in question gave 1 of acid to 24 of water.

The use of hydrochloric acid does not appear to affect the medicinal activity of the resin, and its employment causes the precipitate to rapidly subside—a very great advantage to the manufacturer. Objection has been raised to the acid process, as "the effect of the acid is to throw a larger portion of matter out of solution," and so contaminate the podophyllin, more or less, with matter insoluble in spirit (J. F. Burnett, *THE CHEMIST AND DRUGGIST*, 1887, p. 168).

MODIFIED ACID PROCESS.

Not only is the amount of acid of the 1867 Pharmacopœia unnecessary, but the lesser amount, as given in the U.S.P., is also greatly in excess of what is required. I find even a very small quantity of free acid sufficient to cause rapid separation of the resin; and working on the large scale offers no difficulty if the water used for throwing down the resin, as directed by the B.P., be afterwards rendered faintly acid by the addition of dilute hydrochloric acid. The resulting resin is entirely soluble in rectified spirit and ammonia, and the ash very small indeed. The colour of the resin by the modified process is a very pale straw colour when precautions are taken to avoid prolonged heating during the recovery of the spirit from the original tincture, or when, preferably, the process of repercolation of the rhizome, as suggested by Dr. Squibb, be employed.

ALUM PROCESS.

It is generally understood that the bright yellow variety of podophyllin has been produced by means of alum-water used for the precipitation of the resin. Dr. Lyons (*"Pharmaceutical Assaying,"* p. 126) says:—"There are two principal varieties, one of a bright yellow colour, said to be due to the use of alum in precipitating the resin, the other of a fawn colour, which we may assume has been made by the official (U.S.P.) process." And, in reference to the same, Stillé and Maisch (*"Nat. Dispensatory"*) state that podophyllum resin of a more or less bright yellow colour "has been obtained by precipitating the concentrated tincture with alum-water." It must be borne in mind, however, that the B.P. method can be made to yield a pale yellow resin.

Of a large number of samples examined, and having a bright yellow colour, not one was met with which was entirely soluble in rectified spirit, all giving more or less muddy tinctures and leaving varying amounts of undissolved matter when filtered. Bright yellow podophyllin, made by myself, using distilled water containing a small quantity of alum, was found, however, to be entirely soluble; but, as was anticipated, when hard water was used the product was not so soluble. And very possibly this is the cause, to some extent, why some of the best specimens fail to give bright tinctures, as the precipitate produced in hard water by alum is collected along with the resin.

A CHARACTERISTIC OF ALUM-PODOPHYLLIN.

I noticed that a tincture made from resin of podophyllin produced by means of alum had a very different appearance to another tincture from resin precipitated from the same concentrated tincture but without the use of alum. The former being very distinctly fluorescent, and reminding one somewhat of a tincture of turmeric made with strong spirit.

A tincture from B.P. or acid podophyllin, when shaken up the sides of a white glass tube or bottle, leaves a film which is hardly perceptible, but with alum podophyllin the case is different, and the film gives a very decided yellow appearance. This is observable even when the tincture is so diluted that in looking through it in bulk it appears paler than undiluted tincture of the resin produced without alum.

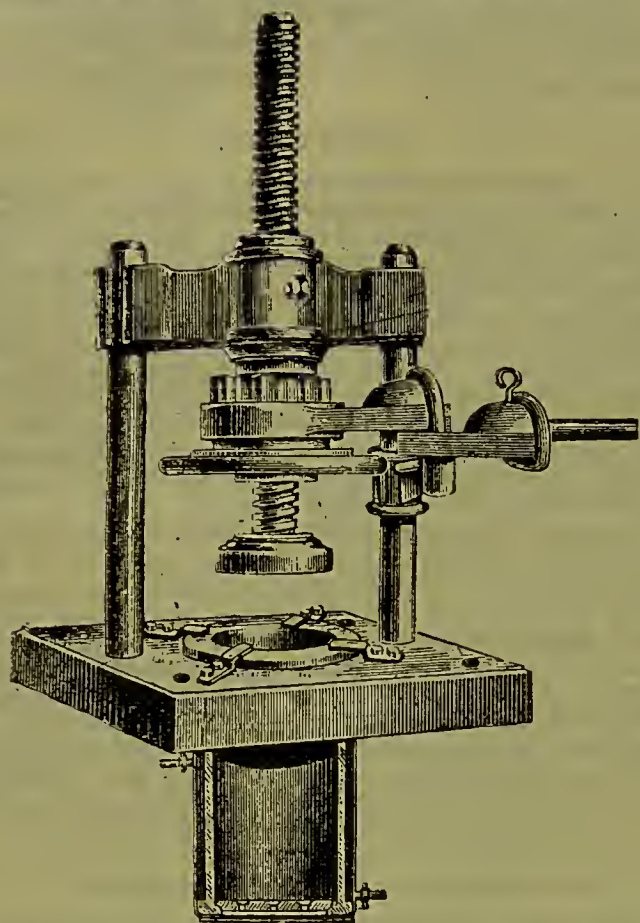
"THE DICTIONARY OF PHOTOGRAPHY," for the amateur and professional photographer, compiled by Mr. E. J. Wall, describes concisely and in alphabetical arrangement all that pertains to the photographic art, including chemistry. Though occasionally in error regarding molecular weights, the dictionary is one of the best photographic books which have come under our notice. It is published by Hazell, Watson & Co. at 3s. 6d.

MESSRS. GURNEY & JACKSON, the successors to Mr. Van Voorst, announce the early publication of a new edition of Attfield's "Chemistry." This is the thirteenth edition of this most popular work; surely there can be no better evidence of its suitability for chemists, pharmacists, and medical practitioners, and the thoroughness with which Professor Attfield keeps it up to date.

Notes of Novelties.

MACHINE FOR COMPRESSING DRUGS.

IN a recent number of the *Pharmaceutische Zeitung* Dr. Hager describes a machine for making liquorice drops and cachous. It is designed by Gustav Chrest, a Berlin engineer. The particular object of this machine is to give powerful pressure, hitherto obtained by the use of hydraulic power or a complicated system of cogwheels. Chrest adopts a dif-



ferential-lever system, and this simplification has the additional advantage of being worked quicker and with less energy. A man in the course of two hours can compress as much as 26 lbs. of material. The outlet of the moulding portion of the machine is so constructed that it can be heated so as to impart a polished appearance to liquorice drops. Our engraving shows this part in section.

PROTECTED CARBOYS.

THE MARPLE CHEMICAL COMPANY, of Marple, near Stockport, are the manufacturers of the iron carboy hamper, with patent protector, shown by the accompanying illustration.



The hampers are made in different sizes and strengths, with iron hoops and girth hoops and top hoops of fluted steel, or ash-wood lined with hoop iron. The protector is also made of iron, and shaped so that when the carboy is packed inside the hamper, and the vacant space between well filled with

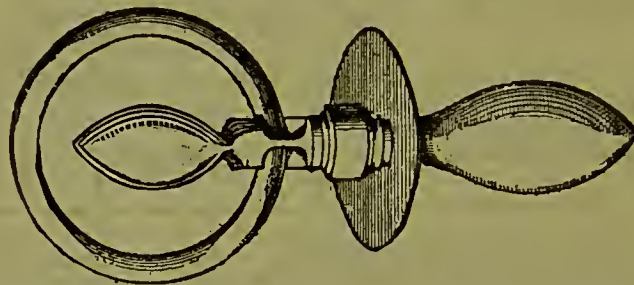
straw or similar material, the protector, when tied to the hamper, only leaves the corked neck of the carboy exposed, and the carboy may be turned upside down when it is being emptied without fear of dislodgment.

UNGUENTUM LANOLINE.

WE are pleased to notice that Messrs. Burroughs, Wellcome & Co. are introducing this preparation, which undoubtedly meets a demand which lanoline itself has created for a compound base, the greater proportion of which should be lanoline itself. In a letter to us they state that, "after a careful examination of the various formulæ which have been published, we have come to the conclusion that the best formula yet devised is that of Mr. Helbing, as published in *THE CHEMIST AND DRUGGIST* of April 20." This base they believe to be better than those made with glycerine fats, as it cannot possibly become rancid; moreover, germs cannot grow in it. The consistence of the ointment appears very desirable for general purposes, and it can be readily mixed with medicaments. It is cream-coloured and of pearly texture, so that it is possible to use it for many toilet preparations, as suggested by Mr. Helbing.

NEW TEETHER.

MESSRS. THOMPSON, WALTERS, HOLE & CO. (LIMITED) are introducing a new teether—the "Eclipse"—which is a



combination of the old-fashioned ivory ring with the more modern and more kindly stuffed rubber-teat. Our illustration shows the form of the article. It is a novelty which is likely to take well.

RESERVOIR TOOTH-BRUSH.

QUITE a novelty in tooth-brushes is introduced by Messrs. Goad & Co., of 42 Moorfields. The brush is made with a tunnel all the way through the handle, communicating with the head of the brush. The reservoir is an indiarubber



bottle, which is filled either with water or with liquid dentifrice. For use the brush is fitted into the indiarubber bottle, and slight pressure on the latter at once wets the bristles, and the brush is used. The brush is brought out at quite a moderate price, and its exhibition is likely to interest customers.

CREAM OF MALT.

THIS is the happy title which Messrs. Oppenheimer Bros. & Co., of Sun Street, Finsbury Square, E.C., have given to a preparation of malt of their manufacture. This extract they have combined with cod-liver oil and three hypophosphites, to form an emulsion which with a little water mixes

perfectly, forming a pleasant draught. The advantages of the preparation are the great degree of division in which the oil exists in it, consequently ensuring ready assimilation, and a very pleasant flavour. We have recently examined the article, and can speak well of it.

News.

THE chemists and druggists and drysalterers of Darwen are now taking a half-holiday to themselves every week. They shut every Tuesday afternoon at one o'clock.

At the last great fair of Nijni-Novgorod, in Russia, no less than 2,650,000*l.* worth of drugs and pharmaceutical goods were brought to market, and nearly all sold.

POISONING BY CARBOLIC ACID.—A widow at Leith, Mrs. Howden, drank a cupful of carbolic acid in mistake for some other fluid on Wednesday of last week, and died half an hour afterwards.

VITRIOL-POISONING.—A child at Ennerdale, Cumberland, upset a jug containing a small quantity of vitriol, spilling some on his hands. He put the fingers in his mouth to ease the pain, and the mouth became burned, death ensuing a few hours later.

THE GLASS-BOTTLE INDUSTRY.—With reference to the statements which have appeared as to the negotiations pending for the foundation of a "ring" in the glass-bottle trade, it is stated that any such movement is discountenanced by Messrs. Nuttall & Co., of St. Helens; by Messrs. Cannington & Co., of St. Helens; and other firms in Lancashire, as well as by Messrs. Alfred Alexander & Co., of London, Hunslet (Leeds), Blaydon-on-Tyne, and Southwick (Sunderland).

VACCINATION.—In the House of Commons, on Thursday, Mr. Picton asked the President of the Local Government Board whether he can now state the names of the Commissioners to inquire into the working of the vaccination laws; whether the inquiry will be open to the public and the press; and whether the pathology of cowpox and the sources of vaccine-lymph will be within the scope of the Commission? Mr. Ritchie: I am not at present in a position to state the names of the Commissioners to inquire into the working of the vaccination laws, but Lord Herschell has consented to preside. In accordance with the invariable practice in the case of Royal Commissions, the inquiry will not be open to the public and the press. With regard to the third point, as I have already stated in reply to a similar question, the terms of the reference have been communicated by me to the House, and I can give no further information as to the scope of the inquiry of the Commission.

POISON CANCELLED THE POLICY.—In the Queen's Bench Division of the High Court on May 10, before Mr. Justice Mathew and Mr. Justice Grantham, the case of *Cole v. The Accident Insurance Company* was heard on appeal. The plaintiff was executor of one Charles Hutton, who had effected an insurance for 1,000*l.* with the defendant company against any personal injury caused by accidental, external, and visible means, the direct effect of which should occasion the death of the insured within three calendar months of the happening of such injury, and also against personal injury caused as aforesaid, but not resulting in death. The policy contained a proviso that the insurance should not extend to "death by suicide, whether felonious or otherwise, or to . . . any death or injury caused by duelling or fighting, or any other breach of the law on the part of the insured, or by poison or intentional self-injury . . ." The deceased was a horse-keeper, and on a shelf in the stable he used to keep a number of embrocations and liniments for sprains for his horses, and also a bottle of medicine for a private ailment. One night he went into the stables in the dark, and by mistake took a wrong bottle of a mixture of corrosive sublimate, and, in consequence, died very shortly afterwards. At the trial the judge directed the jury to find a verdict for the defendants, on the ground that the plaintiff was precluded from recovering by reason of the proviso above-mentioned. For the

appellant, Mr. Digby Seymour, Q.C., moved for a new trial, on the ground of misdirection, and contended that the provision really meant death by poison other than death by misadventure. He argued that, taken in conjunction with the foregoing words, the exception evidently applied to some intentional act of taking poison on the part of the insured. The Court, however, dismissed the motion, holding that the policy was clear in its terms, and that the words "by poison" were not cut down by the context in the manner suggested.

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BAILY—HOBBLING.—On May 9, at the Wesleyan Chapel, Stoke, Devonshire, by the Revs. J. R. Gregory and F. J. Little, Mr. E. Baily, pharmaceutical chemist, Ramsgate, to Miss Mary A. B. Hobbling, eldest daughter of Councillor J. T. Hobbling, of Morice Square, Devonport.

DEATHS.

AKERS.—On May 12, at 139 Leighton Road, Kentish Town, after a lingering illness, Paul Akers, aged 54, for many years the much respected representative over the West of England of Messrs. S. Maw, Son & Thompson.

BENNETT.—On April 28, Mr. Arthur Bennett, chemist and druggist, 14 Union Street, Plymouth. Aged 24.

CADBURY.—Mr. John Cadbury, the founder of the firm of Cadbury Brothers, the famous chocolate and cocoa manufacturers, died at Birmingham on Saturday last, May 11, in his 88th year. He was a well-known member of the Society of Friends, and in his time had taken an active part in the public business of the town, especially in regard to its incorporation some forty years since. In the latter part of his life he devoted himself principally to work connected with the temperance cause and to other philanthropic objects. Mr. Cadbury commenced business in 1824 as a tea and coffee dealer at 93 Bull Street, and a few years afterwards took a warehouse in Crooked Lane, where he began the manufacture of cocoa and chocolate. The business then started has grown to a wonderful extent, and the Messrs. Cadbury have not only been foremost in promoting the development of the consumption of cocoa in this country by their advertisements and by the excellence of their products, but they have also abundantly shared in the success attained themselves, as their extensive works, both at Bournville, where over 1,200 workpeople are employed, and at Birmingham testify. The late Mr. John Cadbury transferred the business he had built up to his sons Richard and George in 1851, and has since spent his leisure and no small part of his wealth in active service for his fellow-creatures. He was at the Friends' Meeting House on the morning of the Sunday preceding his death, but in the afternoon of that day he was seized with apoplexy, from which he never rallied. His wife was Priscilla Dymond, sister of the famous Jonathan Dymond, whose work on the "Principles of Morality" was said to have been one of the chief influences in forming the character of the late John Bright.

GWILLIM.—On May 2, Mr. Walter Robert Gwillim, pharmaceutical chemist, Llanthoney, Abergavenny. Aged 23.

PARKER.—On April 28, Mr. Henry John Parker, chemist and druggist, Blaydon-on-Tyne. Aged 66.

RICHARDSON.—On April 28, Mr. Richard Richardson, chemist and druggist, George Street, Portman Square, London. Aged 57.

SHONE.—On May 5, Mr. John Shone, chemist and druggist, Whitchurch, Salop. Aged 41.

WARD.—On May 3, Mr. Francis Ward, pharmaceutical chemist, Lower Grosvenor Place, London. Aged 70. Mr. Ward had been in business in Belgravia upwards of forty years.

WELCH.—On March 2, Mr. Thomas Welch, chemist and druggist, late of Penistone. Aged 67.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., May 16.

BUSINESS generally has been fairly satisfactory this week, although the drugs sales to-day were extremely uninteresting, and did not result in any considerable changes in the position of the market. Cape aloes are again decidedly dearer, and cardamoms sold at very irregular rates. Fine copaiba balsam remains dear, and cascara sagrada on the spot is said to have changed hands at fully the last rates. Opium is reported dearer from the East. Calabar beans, camphor, and coca leaves remain very firm. Castor-oil is again a little dearer, and rhubarb, Tonquin beans, saffron, and English oil of peppermint are dearer. On the other hand, there has been some decline in Russian anise, cumin seed, Jamaica honey, cascarrilla, chamomiles, Sumatra benjamin, and HGH peppermint oil. In the chemical market the principal feature is the fall in quinine, which to-day touched the lowest point ever known. Caffeine is also tending lower, quicksilver is slightly easier in second-hand, though mercurials have advanced 1*d.* all round since last week; refined camphor is dearer; citric and tartaric acids are firm; cream of tartar somewhat unstable. Cocaine and sulphate of copper have advanced in price, but sulphonah has declined heavily. Sulphate of ammonia, soda crystals, and bleaching-powder are dearer. In drysalteries, &c., we note an improvement in gambier and shellac. China galls remain firm. Jamaica ginger is dearer, but Cochin ginger lower in price. Cotton-seed, linseed, and rape oils are higher.

FIFTY YEARS OF FRENCH FOREIGN TRADE.—Some very interesting statistics regarding the foreign trade of France for the decade between 1877 and 1886, as compared with the five decades preceding have recently been published. These show that the total trade of the country has increased six-fold during the last half-century, the period of by far the greatest expansion being that of the reign of Napoleon III., when a liberal commercial policy prevailed. During the last ten years French exports have been almost stagnant, the increase between the decade ending in 1886 and its predecessor having been only 2½ per cent., as compared with 63 per cent. for the decades 1857-66 and 1867-76. Fifty years ago the principal countries sending goods to France, in order of their importance, were:—United States, Italy, Belgium, United Kingdom, Germany, Russia; now they are:—U. Kingdom, Belgium, U. States, Germany, Italy, Spain. Fifty years ago the countries to which France sent most goods, in the same order, were:—U. Kingdom, U. States, Germany, Spain, Italy, Belgium; now they are:—U. Kingdom, Belgium, Germany, U. States, Switzerland, Italy. The average exports of articles of pharmaceutical interest from France, in millions of francs, have been as follows:—

Chemicals	Dye-wood Extracts	Fixed Oils	Prepared Medicines	Common Soap	Per- fumery
1837-46 .. 7.9	1.1	3.2	3.2	2.3	8.0
1877-86 .. 56.6	17.6	23	11.7	8.5	8.2

French perfumery is the only one of these articles which does not show up well, its fluctuations having been as follows:—

	1837-46	1847-56	1857-66	1867-76	1877-86
Million francs	8	10.5	14.2	12.7	8.2

A CENTURY OF AMERICAN TRADE.—The U. S. Bureau of Statistics has recently published some figures showing the progress of the United States' trade between 1789, the first year of the constitutional government of the Republic, and

1888, the year which completes the first century of its existence as an organised State. The imports in 1789 were declared at a value of \$23,000,000; in 1888 at \$733,500,000; and the exports have grown during the same period from \$20,000,000 to \$723,500,000. A hundred years ago commercial statistics were not, of course, kept with the same care and detail as at present, but the following figures will convey some idea of the growth of some of the exports of the country of interest to the drug trade. They refer to the exports for the entire year 1789 and those of the ten first months of 1888, the complete figures of the latter year not being in our possession at present:—

	Potash	Candles	Spermaceti	Whale Oil	Ginseng
1789	\$661,634	45,113	79,542	124,908	47,024
1888	\$891,918	1,654,864	322,037	1,528,376	299,569
	Medicines	Soap	Seeds and Roots	Turpentine	Lard
1789	\$1,733	3,967	2,689	73,573	31,475
1888	\$1,373,523	17,718,127	118,832	9,728,314	876,671

No sufficient statistics of imports were kept a century ago to admit of comparison.

ACID (CITRIC).—There has been a slightly better inquiry during the last day or two, though the quotation is still unaltered, at 1*s.* 4½*d.* per lb. on the spot. The stock of lemon juice in Messina at the commencement of the month was a large one (about 2,500 pipes), and caused prices to recede by about 5*s.* or 7*s.* 6*d.* per pipe. It is said that a further reduction seems probable, unless an improved demand should set in.

ACID (OXALIC) dull at 4½*d.* per lb. Salts of sorrel unchanged.

ACID (TARTARIC).—The market is firm, and a fair amount of business is reported. *German* make is said to have been sold for May delivery at 1*s.* 3*d.* per lb., while for *English* makes 1*s.* 3¼*d.* per lb. is the lowest quotation at this moment.

ALOES.—Of *Cape* aloes—which, it is said, will be very scarce this season, in consequence of the unremunerative prices which have prevailed so long—119 packages were offered, and 102 of these sold, with very good competition, at a considerable advance, commencing at 1*s.* for the first lot, but rising occasionally much higher. Good bright hard brought 22*s.*; somewhat drossy and partly soft, 20*s.* to 21*s.*; coarse and drossy from 19*s.* down to 13*s.*; and common sandy and stony, 10*s.* to 5*s.* per cwt. *Curaçao* in moderate supply and still very cheap. Only one lot of fine brown gourds was shown, and bought in at 90*s.* per cwt.; fair bright, part coarse liver, brought 20*s.*; fair *Capey* in boxes to fine in gourds, 20*s.* to 31*s.* per cwt. Of *Zanzibar* and *East Indian* aloes nothing was sold. An offer of 85*s.* per cwt. for good red soft Zanzibars was refused.

AMBERGRIS.—Two tins were offered to-day, and for one of these a bid of 72*s.* 6*d.* per oz. was refused. Another of spurious quality, quite black and without flavour, could not find a purchaser.

AMMONIA SALTS.—*Carbonate* quiet at 3¾*d.* to 4*d.* per lb. *Sal ammoniac* selling steadily at firm rates; firsts, 36*s.*, seconds, 34*s.* per cwt. *Sulphate* closing firmer at 12*l.* Beckton terms, 11*l.* 17*s.* 6*d.* London 24 per cent. grey, and Hull and Leith 11*l.* 16*s.* 3*d.*

ANISE.—*Russian* is again easier, especially for the lower grades, which are rather plentiful. Of *Japanese* (spurious) *Star-anise* 40 cases were offered by auction to-day and bought in at 40*s.* per cwt. nominally.

ARSENIC remains fairly well inquired for, and the price keeps up steadily at 13*s.* to 13*s.* 3*d.* per cwt. for white powder.

ATROPINE.—At present 11*s.* 6*d.* is still quoted for sulphate in tins, and 11*s.* for bulk; but it is thought by some that these quotations are not likely to advance, as a much smaller crop of belladonna root is expected to be gathered this season than the year before.

BALSAMS.—No *Copaiba* was offered at the auctions to-day, but privately the market remains exceedingly firm, and no fine Maranham is offering below 3*s.* per lb., although a quantity of adulterated balsam, reshipped from New York, is said

to be on the market at 2s. 6d. to 2s. 8d. per lb. For *Peru* balsam 4s. 3d. per lb. is asked.

BLEACHING POWDER.—The deliveries have been larger lately, and prices are rather firmer, 7l. 2s. 6d. to 7l. 5s. on the Tyne, and 8l. to 8l. 5s. ex warehouse in London.

BORAX.—The makers still hold at 30s. per cwt., but second-hand holders are still sellers at 28s. to 28s. 6d. per cwt.

BUCHU LEAVES.—Fair round green leaves of good colour, somewhat stalky mixed are offering cheaply at 2d. per lb.

CAFFEINE.—The pure *Alkaloid* is quoted at from 11s. 6d. to 12s. 6d. per lb., the *Citrate*, in crystals, at 10s. to 11s. per lb.

CALABAR BEANS.—The last West African steamer has brought nearly 40 bags, but before its arrival at Liverpool 13 bags had changed hands there at 11d. per lb., which shows a fresh increase. But it is not unlikely that price may now decline somewhat.

CALUMBA.—Only a few lots were offered for sale to-day, and the only transaction consisted in one or two lots of rather dark small to bold slightly wormy root at 15s. per cwt.

CAMPHOR (CRUDE).—At the end of last week there were further small transactions in *Japan* camphor at 102s. 6d. per cwt. on the spot, while a parcel for arrival is said to have changed hands at 92s. per cwt. "c.i.f." terms, and 150 tubs *Japan* camphor, now landing, at 97s. 6d. per cwt. Since then we hear (though we have not been able to confirm the rumour) that 105s. has been paid for a small quantity on the spot, and that scarcely any camphor is offering for arrival. Twenty-five packages have been received this week. Regarding *Chinese* camphor, a report from Taiwan, in Formosa, the chief market for this article, states that the trade, which is chiefly in the hands of one German firm, has appreciably increased during 1888, the value of the export having more than trebled, and the quantity increased from 281 cwts. in 1887 to 1,144 cwts. in 1888. The Chinese officials have done all in their power to put a stop to the traffic by vexatious interference with those engaged in it. They attempted at first to prevent all foreign share in the trade by declaring it a Government monopoly, but all the representatives for the Treaty Powers at Peking have united in refusing to recognise such a pretension. Nevertheless, repeated seizures of camphor in the hands of foreigners have been made, and the prosecution of the traffic remains up to the present involved in difficulties.

CAMPHOR (REFINED).—On Friday last the English refiners, owing to the rise in crude camphor, advanced their quotation for *bells* from 1s. 3d. to 1s. 4½d. per lb., tablets being quoted higher in proportion, and at that price they are now selling. One of the largest Hamburg factories is said to have been obliged to temporarily stop working, owing to a mishap in the machinery.

CANARY SEED.—There has been a very good demand, both for home consumption and for export lately, and prices have kept up very well indeed. *Turkish* canary seed is at present worth from 38s. up to 44s. or 45s., *Morocco* from 42s. to 46s., *Spanish* 52s. to 64s., and *Dutch* seed from 38s. to 42s.

CANTHARIDES.—Three cases good new partly bold *China* may be had at 1s. per lb., but the owner would not accept 1d. less. *Russian* flies of good colour bought in at 4s. 6d. per lb.

CARDAMOMS.—The quantity offered this week was again fairly large, consisting of 357 packages, of which 192 found buyers. The market is extremely irregular, and several holders did not care to sell at the prices offered to-day, although these were generally fully equal to the last auction rates, only one or two lots selling noticeably lower. The following prices were paid:—*Ceylon Malabar*, medium to good bold palish, 1s. 9d. to 1s. 10d.; good small to bold pale round and long, 2s. 2d.; medium pale round, 1s. 8d.; good bright small to medium, 1s. 7d.; small to bold specky, pale and yellow mixed, 1s. 6d.; small to medium fair brownish mixed, 1s. 2d. to 1s. 4d.; round brown split, 1s. to 11½d. per lb. *Mysore*, fine bold heavy pale, 2s. 9d.; very fine pale ditto, 2s. 10d. to 2s. 11d.; medium to bold good palish, 2s.; medium size long and round mixed, 1s. 9d.; small to medium round, 1s. 9d.; medium but yellow and specky, 1s. 4d.; small long pale, 11d.; discoloured, all kinds mixed, 10d. per lb.

Mangalore character, fair medium to bold, rather dull grey coat, 1s. 11d. *Tellicherry*, light brown shelly, 5½d. to 6d. per lb. *Seeds*, 1s. 4d. per lb.

CASCARA SAGRADA.—Holders quote from 2s. 11d. to 3s. 1d. per lb. for genuine bark on the spot, and one is said to be selling at the latter price, which is rather above that paid at the last auctions. For arrival from 65s. to 80s. per cwt. "c.i.f." is quoted, but it is said that shipments will not be made quite so early as had been anticipated. The *O. P. & D. Reporter* makes the following remarks, which should be taken for what they are worth, as they do not seem to be accurate in all respects:—"Already there are indications that a very large supply of cascara will be forthcoming when the season opens, not alone from the usual sources of supply, but from regions where heretofore it was supposed that none of the bark existed. From reliable authority" our contemporary learns "that from the forests of Washington and from all along the Pacific coast cascara will be shipped. Samples of bark from these new sources have already found their way to the East, and, though known under different names, such as Cheatham bark, are pronounced to be genuine cascara. Last season the market opened at 2½d. per lb., and this year also the price may touch that figure early in the season, though it is also asserted that 3½d. will be the lowest possible price, as at 2½d. it does not pay to collect the bark. A few weeks ago, when speculation ran high in the article, about 30,000 lbs. are said to have been sold by speculators at 7½d. to 10d. per lb. for July-October delivery, and as July shipment can now be had in New York at about 4d. per lb. these contracts will leave a handsome profit. The new crop is likely to be very early this year, because the new method of drying the bark by steam is being widely followed."

CASCARILLA is slowly coming down in price, and a few small arrivals have lately been received. At auction to-day 65 bags were offered, and nearly all sold, good bright silvery quill, somewhat woody mixed at 30s., thinner and partly false packed 25s. 6d. to 22s. 6d., and thin partly damaged from 21s. 6d. to 20s. per cwt.

CHAMOMILES.—Eleven bales were sold at auction to-day at lower prices than have been ruling privately—90s. per cwt. for good pale French flowers, and 45s. per cwt. for rather dull grey Belgian seconds.

CINCHONA.—Of flat *Calisaya* bark a few serons were sold to-day at 1s. 7d. to 1s. 8d. for partly damaged to sound bark, while for a parcel of *Porto Cabello*, imported *via* Hamburg, 1s. 1d. per lb. is asked. Good *Red Madras* bark, druggists' quills, sold at 8d. per lb. A few lots of fair but dusty *Loza* were bought in at 1s. 10d. per lb. For good *Lima* bark, which now has a very restricted market, 2½d. was refused, 2½d. being the price. The shipments from Ceylon have much decreased lately, and on May 4 were only slightly in excess of those of the previous season. The figures then were:—October 1 to May 4, 1888–9, 6,900,000 lbs.; 1887–8, 6,700,000 lbs.; 1886–7, 9,250,000 lbs. Since our last report 3,682 packages have been landed here from all parts.

COCA LEAVES.—Good qualities are scarce on the spot, and for two bales good thin green *Truxillo* leaves 1s. 1d. per lb. was readily obtained.

COCAINE.—German makes have been further advanced to 16s. per oz. in tins for the lowest price. Messrs. C. F. Böhringer & Sons have received private information from Peru confirming the news of the partial destruction of the railway which connects Lima with Chicla. It will take some months before the communication will be reopened, and meanwhile the coca leaves must be forwarded by mules at an increased expenditure. Of crude cocaine there are only small quantities at Hamburg in second hand. The agents of the South American manufacturers have no stock whatever just now, and expect very little during the next months.

COLOCYNTH.—Fair pale *Turkey* apple is firmly held at 1s. 4d. per lb., and an offer of 1d. per lb. less was not entertained.

COTO BARK.—One seron damaged coto was bought in at 4s. 6d. per lb. nominally, while para-coto is held at 2s. per lb.

COWHAGE.—At auction to-day 16 tins were shown, most of them being of pretty good appearance, and not too much

weighted with stones. For such lots 1s. 1d. to 1s. 2d. per lb. is required.

CREAM OF TARTAR.—We can scarcely call the market stronger this week, but for first French crystals 97s. per cwt. still seems the nearest price.

CROTON SEED.—Fifty-eight bags Ceylon seed were sold to-day at 15s. per cwt.

CUBEBS.—Two bags from Singapore, good flavour, but largely mixed with spurious berries, were bought in at 24l. per cwt., 22l. being solicited. The 195 piculs to which we referred last week have since been landed at Marseilles, while 91 bags have also been received here.

CUMIN SEED.—*Malta* seed is very dull of sale, and prices are still declining, from 25s. 6d. to 28s. per cwt., according to quality, being accepted at to-day's auctions. *Morocco* cumin may be had at about 30s. per cwt. for best quality.

CUTTLEFISH.—For 9 cases medium-sized fair-coloured Bombay 4d. per lb. was refused, and for another lot of good colour 5d. per lb. is asked.

DRAGON'S BLOOD.—Eighteen cases ordinary bricky lump were bought in at 70s. per cwt., and another lot of fair small saucers was also bought in at 5l. 2s. 6d. per cwt.

ERGOT OF RYE.—For *Russian* ergot, which is scarce, a good demand has sprung up, resulting in sales of about 3 tons by private treaty at 10½d. to 10¾d. per lb. Of *Spanish* ergot there are fairly large stocks, and prices are weak. For 4 bags of very wormy quality 11d. was refused, 1s. to 1s. 1d. per lb. being suggested.

GALLS.—While other varieties are much in request, *Turkey* galls remain neglected, with large arrivals and very slight inquiry; good whites at 42s. 6d. to 44s. per cwt.; blue up to 58s. per cwt. Of *China* galls further sales have been made at 63s. on the spot, which is steady.

GAMBIER has again advanced, and *Block* has changed hands at 27s. 3d. to 27s. 4½d., and March–April shipment at 27s. 3d. per cwt.

GAMBOGE.—Several parcels were shown to-day, and 18 cases sold at 10l. 10s. for bold ricey pipe, rather discoloured surface; 10l. for a slightly inferior lot; 9l. 12s. 6d. for damp small blocky pipe; and 9l. 5s. to 9l. 10s. for fair to good pickings. For a lot of fair-coloured blocky pipe 12l. 2s. 6d. was refused.

GINGER.—The demand for *Cochin* ginger continued during the beginning of the present week, and large quantities of rough *Cochin* in robins sold at 21s. to 22s. per cwt., native cut at 31s., and C cut also at 31s. per cwt. For arrival business was also done, at 25s. "c.i.f." for May–June steamer shipment, usual Calicut assortment. At the auctions a very heavy supply was offered, and prices declined from 1s. to 4s. for *Cochin*. *Jamaica* ginger, however, sold again dearer, up to 6l. per cwt. for fine selected bold.

GLYCERINE.—Some of the German agents now quote double distilled s.g. 1.260 as low as 64l. per ton, others still adhere to their former and higher quotations.

GUM ARABIC.—A rather large quantity of *Cape* gum was offered at to-day's auctions, and a few packages sold at 87s. 6d. per cwt. for good pale, partly ambery, small dusty sorts. Eight casks dusty and reddish mixed white *Mogadore* sorts were bought in at 6l. 7s. 6d. per cwt., and 41 packages glassy olibanum, scented *Aden* sorts, at 80s. per cwt.

GUM BENJAMIN.—Of *Siam* gum 30 cases ordinary dark block and grain were offered and bought in at 6l. 10s. per cwt. *Sumatra* gum sold somewhat cheaper, 8l. 12s. 6d. to 8l. 15s. for fine pale centred gum, of strong flavour and slightly brown borders, and 7l. 5s. to 7l. 15s. for reddish seconds, false packed, with almond centres, and fair old yellow almonded seconds. *Palembang* in small boxes, of good appearance and flavour, is held at 62s. 6d. per cwt.

GUM GUAIACUM.—Sixteen cases sold at pretty good prices, 11½d. to 1s. for bold loose drop, 9d. to 10d. for smaller, 9d. for drossy lump, and 6d. for common woody siftings. Three cases of a resin much resembling guaiacum were offered, and two of these sold without reserve at 7½d. per lb.

GUM MASTIC is reported dearer.

GUM MYRRH without inquiry. Fair palish sorts are held at 80s. to 82s. 6d. per cwt.; dark woody pickings sold cheaply at 15s. to 21s. per cwt.

HONEY.—There has been another arrival of 285 cases from San Francisco by the *Kylemore*. At to-day's auctions several lots were offered, including 81 barrels *Cuba* honey of direct import, which were all bought in, 30s. 6d. being refused for good palish candied quality. *Jamaica* honey sold several shillings lower: 34s. to 36s. for fair to good sweet candied white, 30s. 6d. to 35s. for fair to good pale liquid, and 18s. for very dark honey. In 1888 Chili exported \$99,616 worth of honey, against \$69,032 in 1887.

INSECT FLOWERS.—Conflicting news comes from Trieste, on which market, in anticipation of the new crop, which is not far off now, speculative manœuvres between the "bull" and "bear" parties are in full swing. Open flowers are to-day quoted at 125s. per cwt., and closed at 160s. per cwt. "c.i.f." terms, and best powder at 1s. 5d. to 1s. 6d. per lb. At the auctions a quantity of powder of fair colour, but said to be mixed with the Hungarian daisy, was offered and bought in at high prices. "Bear" operators assert that the cultivation of the flowers has greatly increased lately, and that very heavy quantities are expected from the growing crop.

IODINE firm, but unchanged. *Crude*, 12s. 9d.; *Resublimed*, 13s. to 13s. 3d. per lb.; *Potassium iodide*, 11s. 6d. to 11s. 9d. per lb. The exports of crude iodine from Chili in 1888 were valued at \$913,750, against \$771,960 in 1887.

IPECACUANHA.—Another arrival of 40 packages is said to be due, but it will fall into the hands of firm owners, who are not likely to give way in the matter of price. Of 50 packages which were advertised, 20 had not been landed, and 20 sold at about previous rates to a very slight reduction; good sound, partly very stout root, 7s. 6d. to 7s. 8d.; slightly mouldy and damaged, 7s. 4d. to 7s. 8d. per lb. Two bales *Carthagena* character were bought in.

LINSEED steady for fine *Dutch* at 47s. per 424 lbs.; *Turkish* and *Russian* seed, 40s. to 43s.; white linseed is rather inquired for.

MAGNESIA SALTS.—*Carbonate* quiet at 40s. to 45s. per cwt. *Calcined* magnesia, 1s. 2d. to 1s. 4d. per lb. *Epsom* salts in good demand at 85s. per ton.

MANNA.—The prices are very low at present.

MATICO.—Twenty bags very dark and stalky leaves, nearly black, were bought in at 3d. per lb. to-day.

MERCURIALS.—The manufacturers of mercurials on Friday last raised their quotations by 1d. per lb., their prices being now, for *Calomel*, 3s. 4d.; *Corrosive sublimate*, 2s. 8d.; *Ointment*, 2s.; *Red precipitate*, 3s. 7d.; *White ditto*, 3s. 6d.; *Blue pill*, 2s.; *Vermilion* (English), 2s. 9d. per lb.

MUSK.—The assortment offered to-day was not a very large one, and first-class lots were wanting. Of *Tonquin* pods, first pile, about 9 tins were sold at figures which certainly did not show any advance, 77s. for thin blue-skinned pods, mostly broken, small to bold and very damp, while it was said that another lot of old-fashioned, small to very bold, wet, horny and skinny musk was sold at 74s. 6d. per oz. For two caddies dry old-fashioned pods, top and under skin, medium to very bold, 75s. per oz. was paid. Bold damp *Yunan* pods are held at 45s. per oz.

MUSTARD SEED.—A somewhat better demand is said to have sprung up lately, and brown seed especially is scarce. Fine white *English* is worth 11s. to 12s. per bushel, and foreign up to 9s. per bushel.

NUX VOMICA.—Forty-seven bags fair silky *Cochin* sold at 10s. 3d. per oz.

OIL (CASTOR) remains very firm, and scarce for the finer qualities. Good *Calcutta* seconds are held at 3½d. per lb. in London now, and the same limit is imposed on a parcel of very yellow Bombay oil shown at auction to-day. In Liverpool there has been a very good demand for *Calcutta* seconds, of which the price now stands at 3d. per lb., though there is very little offering.

OIL (OLIVE).—In London and Liverpool the markets are quiet, at 34l. for *Spanish*, 33l. 10s. for *Messina*, and 31l. for *Mogadore* oil. The first lots of oil are just being brought

to market in the South of France. The manufacturers are asking high prices, especially for the finer qualities, as, according to them, the crop has been by no means so plentiful as was at first thought to be the case. In Sicily the supply of oil remains small, and there is but little available for export, as the bulk is taken for home consumption. Regarding the oil markets in Southern Italy, we hear from Naples that the visible stock consists of about 6,000 tuns at Gallipoli, about 3,000 tuns at Gioja, and 3,000 to 4,000 tuns between Taranto and Brindisi; but, besides this, 10,000 to 12,000 tuns have remained in the interior of the province of Lecce, which are likely to be pressed for sale a little later on, if the new olives set favourably. Thus far the season has been most favourable; fine seasonable weather set in with Easter, which has been followed by further good rains. The olive trees are strong and healthy, and the budding gives hopes for a large crop at Gioja, and for fair average crops at the other districts.

OIL (PETROLEUM).—Very little stirring in this article at present, and the trade is still almost entirely confined to small spot sales, futures being held at full rates. American, $5\frac{5}{16}d.$ to $5\frac{7}{8}d.$ spot, according to brand; September-December, more or less nominal at $5\frac{7}{8}d.$ to $6\frac{1}{8}d.$; spot selling at $5\frac{1}{16}d.$ to $5\frac{1}{8}d.$; spot September-December, $5\frac{3}{8}d.$ to $5\frac{1}{4}d.$

OILS (ESSENTIAL).—*Star anise* oil is firmer. At auction a case was sold at 5s. 10d. per lb., but privately 5s. 11d. is asked. *Cassia* dull and neglected. Of 100 cases *Citronella* offered at auction to-day 20 were sold at $\frac{5}{8}d.$ per oz., but the holder refused to proceed at $\frac{1}{2}d.$ per oz. *Clove* oil firm at 4s. 6d. to 5s. for English distilled, according to quality. *Otto of rose* very steady and a fairly good trade reported. American oil of *Peppermint* is offered at 13s. per lb. for HGH. Regarding English oil some particulars will be found on another page. All *French* oils are late this season.

OILS (VARIOUS).—*Cocoonut* very dull and only a retail trade passing. Ceylon on the spot is held at 25l. to 25l. 10s., but sailer shipment may be had at 23l. 10s. landed terms. *Cochin*, 27l. to 28l. *Mauritius*, 25l. 15s. *Cotton-seed oil*, crude, 22l. 10s.; refined, 24l. 10s. to 26l. *Linseed* has been in good demand, and prices have advanced all round. Spot is now 19l. 15s. to 20l.; May-August has been done at 20l.; September-December, 19l. 15s. *Palm oil* firm at 23l. 10s. to 24l. for fine Lagos. *Rape seed*, brown oil firmer and dearer, 26l. having been paid; English refined, 27l. 10s. to 28l. quoted. *Turpentine*.—There has been a good deal more demand lately for consumption, but prices close easier again. Spot, 33s. to 33s. 3d.; June, 30s.; July, 29s. 6d.; September-December, 28s. 6d. per cwt.

OPIUM.—A not inconsiderable business has been transacted here at somewhat advanced prices, owing partly to the persistent reports of damage to the crop in Asia Minor, which, it is said, will not yield over 4,000 cases.

PHOSPHORUS has been reduced in price, and wedges are now selling at 1s. 10d., sticks at 1s. 11d., and amorphous at 3s. 1d. per lb.

POTASH SALTS.—Montreal *Potashes* dull of sale at 22s. 6d. per cwt.; *Bichromate* quiet at $4\frac{1}{2}d.$ per lb.; *Chlorate* firm at $4\frac{3}{4}d.$ to $4\frac{3}{8}d.$ per lb. on the spot. *Prussiate* firm at $6\frac{3}{4}d.$ to $6\frac{7}{8}d.$ for foreign and English yellow, and 1s. 7d. per lb. for red.

QUASSIA WOOD.—Four tons were sold to-day at 6l. 5s. per ton, the same price as before.

QUICKSILVER.—The importers' price of 8l. 10s. per bottle was confirmed on Friday last, and on that day there was a very strong demand, with sales in second-hands up to 8l. 7s. 6d. per bottle. But as the week advanced second-hand holders have moderated their pretensions, and they now offer at 8l.

QUININE.—At the end of last week the Brunswick agents reported a sale, first hand, of 20,000 oz. July-December delivery at 1s. $1\frac{1}{4}d.$ per oz. During the present week the article has been very quiet, with sellers of second-hand German at 1s. $0\frac{1}{2}d.$ to 1s. $0\frac{1}{4}d.$ per oz., but few buyers, though a small quantity of Brunswick quinine is said to have been done at the latter price. To-day 12,000 oz. *Auerbach* sold by auction "without reserve" in lots of 10 tins of 100 oz. each. The first lot brought 1s., the following $11\frac{3}{4}d.$ and $11\frac{1}{2}d.$, until the

last closed at $11\frac{1}{2}d.$ per oz. The shilling limit has thus been passed, and the record beaten. The following are the present quotations (nominally) for the leading brands in manufacturers' hands: *Howard's* bottles, 1s. $6\frac{1}{2}d.$; tins, 1s. 4d. *Whiffen's* bottles, 1s. 5d.; tins, 1s. $2\frac{1}{2}d.$ to 1s. 3d. *Pelletier's* bottles, 1s. 6d. per oz. *Zimmer* and *Jobst* bulk, 1s. $2\frac{1}{2}d.$ to 1s. 3d. *Brunswick*, *Mannheim*, and *Auerbach* bulk, 1s. $1\frac{1}{2}d.$ *Milan* bulk, 1s. 1d. The imports of quinine into the United States for the first four months of the year have been: 1889, 1,129,755 oz.: 1888, 532,300 oz.

RHUBARB.—At to-day's auctions about 116 cases of rhubarb were placed on show, and nearly 90 of these found buyers at very full prices and occasionally some advance. The following prices were paid:—*Shensi*.—Round, bold, fair rough coat, $\frac{1}{2}$ loose grey, $\frac{1}{2}$ dark fracture, 1s. 1d.; round small to medium fair coat, $\frac{3}{4}$ pinky, $\frac{1}{4}$ dark, 3s. 1d. refused; medium fair coat, part rough, $\frac{1}{2}$ pinky grey, 2s. 4d.; flat, bold fair bright coat, $\frac{3}{4}$ pinky grey, $\frac{1}{4}$ dark, 2s. 9d.; medium fair coat, $\frac{3}{4}$ loose pinky grey, $\frac{1}{4}$ dark fracture, 1s. 5d., rising to 1s. 8d.; small fair coat even fracture, 1s. 7d.; medium, rough horny, $\frac{1}{2}$ pinky grey, $\frac{1}{2}$ dark, 1s. 2d.; common rough horny, $5\frac{1}{2}d.$ to 9d. *Canton*.—Small good coat, slightly wormy round druggists' root, 1s. 10d.; ordinary wormy, $10\frac{1}{2}d.$ down to $5\frac{1}{2}d.$ *High dried*, fair coat and fracture but wormy, 11d.; new arrival, bold fair bright coat, $\frac{3}{4}$ pinky grey, $\frac{1}{4}$ dark, 1s. to 1s. $0\frac{1}{2}d.$; smaller, 11d. to $11\frac{1}{2}d.$ per lb. We hear that prices in Shanghai are above the London parity.

SAFFRON has advanced 1s. per lb. since last week.

SARSAPARILLA.—Three bales damaged *Guayaquil* sold at $8\frac{3}{4}d.$ per lb. Crown *Honduras* is limited at 1s. 2d. per lb. *Jamaica* very dull; a few lots fair grey bundles sold at 1s. 6d. for sound, and 1s. 4d. to 1s. 5d. for damaged.

SCAMMONY.—The price for good is about 27s. per lb., and for seconds 24s. per lb.

SENNA.—There has been a good demand privately at full rates, but at the auctions a very poor assortment was shown, and the bulk of the supply was bought in—good small green leaf at 4d., fine bold green ditto at $\frac{1}{2}d.$ to $\frac{1}{4}d.$ per lb.

SHELLAC.—The week closed with a somewhat better demand at reduced rates, and sales of TN *Orange* for May delivery at 62s. per cwt. At the weekly auctions 854 cases were offered, and about half of these sold at a decline of 2s. on *Orange* and *Garnet* and nearly 5s. for *Button lac*. The prices paid include:—Ordinary red to fair bright second, 58s. to 62s.; fine but cakey FOS in diamond, 66s. to 67s. per cwt. *Garnet* AC good, 48s. to 49s.; blocky ditto, 48s. per cwt. At to-day's ring, under the influence of favourable reports about the shipments for the first half of May, prices advanced nearly 3s., and business was done as follows:—

	May	June	July	Aug.	Sept.
Second orange TN, sellers	200	68/	100	100	69/
" buyers	66/	66/	68/	68/6	68/
Garnet AC, sellers	..	51/6	100	53/6	—
" buyers	..	51/	52/	52/6	—

SODA SALTS.—*Ash* is in good demand at $1\frac{1}{4}d.$ per degree landed here, and 1d. on the Tyne. *Bicarbonate* also is in good demand at 5l. 2s. 6d. per ton. For *Caustic* soda there has been some inquiry, and 70 per cent. spot has been done here at 7l. The firmer feeling for *Crystals* still continues, and spot stuff is scarce at 49s. 6d. to 50s. ex ship here, and 42s. to 42s. 6d. on the Tyne for immediate delivery; fine 45s. *Nitrate* 8l. 7s. 6d. to 9l. 5s., according to quality.

SULPHONAL.—The existence of two factorics outside the "ring," and the recent establishment of two more, who offered their produce below the convention rate, has quite disorganised this article. Accordingly the manufacturers met in Cassel on May 9, and tried to form a new convention for sulphonal, but failed to agree. Now everyone is bidding against his neighbour, and prices range upwards from 22s. 6d. per lb. There are now ten manufacturers.

TAMARINDS remain very quiet, and not in much demand.

TEA.—The China market is flat, and a heavy sale on Tuesday of no less than 24,000 packages sold irregularly, Mondays showing the most marked decline. Some very cheap teas,

first crop Monings with some quality, were knocked down from 5½*d.* to 7*d.*, and a small lot boxes Souchong counterpart sold 1*s.* 6*d.* only realised 8½*d.* per lb. Common grades for price showed a weaker tendency, but can hardly be quoted lower. First crop Chingwos and Panyongs showed rather lower prices, fair tea fetching 7½*d.* to 8*d.*, and a really fine tea was taken out at 8½*d.*, no better bid being obtainable. The market is open at Hankow for the new season's teas, but buyers there are in a cautious frame of mind, and reports say that but little has as yet been settled for England, almost all the buying so far being on Russian account. Assams are selling at previous rates, sales being light. Fine teas, as is also the case with Ceylons, are wanted and very strongly competed for, and teas for appearance are also getting very scarce. Lower grades are dull, and for Ceylons must be quoted rather lower again. The Produce Clearing House has commenced its long-threatened invasion of the tea trade, launching a pamphlet with a most elaborate set of rules, benevolently framed for the benefit or otherwise of those who may be desirous of speculating in margins in tea. The interest excited, however, in the trade itself is of the most languid description.

TONQUIN BEANS dear and scarce. Two casks fair frosty *Pará* sold subject to approval at 3*s.* 3*d.* per lb.; foxy *Pará* at 2*s.* 1*d.* per lb.

VANILLA.—A fairly large quantity sold at steady rates, *Mauritius* slightly crystallised chocolate, 5½ to 7½ inch, 14*s.* to 17*s.* 6*d.*; fine 8 to 9 inch, 23*s.* to 23*s.* 6*d.*; brownish 3½ to 7½ inch, 8*s.* to 13*s.* 6*d.*; good 7½ to 9 inch, 16*s.* 6*d.*; *Ceylon* at 3*s.* to 9*s.* per lb.

WAX (BEES') remains in very good demand, and brings full prices: *Jamaica*, fine reddish orange, 6*l.* 2*s.* 6*d.*; brown and orange, 6*l.*; red, 5*l.* 15*s.*; brown and dark mixed, 5*l.* 7*s.* 6*d.* to 5*l.* 10*s.* *Australian*, dark to medium grey, 5*l.* 10*s.* to 5*l.* 15*s.* per cwt.

THE GERMAN MARKETS.

HAMBURG, May 14,

THERE is no change in the market of drugs and chemicals, and a very quiet tone still prevails, buyers confining their purchases to the smallest limits consistent with their requirements.

ALOES.—Very little is doing in *Cape*, while the *Curaçao* variety is quite neglected; 80 cases are offered at 35*m.* to 40*m.*, a very low price.

BALSAMS.—*Copaiba*.—There was rather less demand, and a quieter feeling prevails; 66 cases Maracaibo, ex *Teutonia*, are offered at 5.50*m.* *Peruvian* remains in moderate demand, and prices are steady. *Tolu* neglected; holders ask 2.90*m.*

BARKS.—Fine *Angostura* unchanged; 50*m.* to 70*m.*, according to quality. A lot of ordinary bark (so-called "grey" bark) was sold at about 30*m.* *Cinchona*.—Porto Cabello weaker; since last week 312 bales have arrived, of which part has found buyers, 120*m.* to 130*m.* being asked for good quality. A parcel of genuine flat Calisaya sold well at 4*m.*; 46 bales are expected. *Condurango* is in small supply at first hands, and the position appears to favour higher prices, although as yet from 1.70*m.* to 1.80*m.* is still the ruling rate. In *Quillaya* there is no alteration in value; holders still ask 32*m.*; 200 bales are on the way.

CAMPHOR (REFINED) has advanced, and cannot now be had under 250*m.*, on the spot and delivery.

ERGOT OF RYE remains steady, but without much business, sound cases being quoted at 1.90*m.*

MATICO.—Of 127 packages just arrived, about half was disposed of at lower prices.

MUSK SEED in large supply, and obtainable at very low rates; 88*m.* to 92*m.*, according to quality, is now the price.

OIL (COD-LIVER).—The feeling in the market is weaker, and prime strained can be had at 65*m.* per cask.

SABADILLA SEED continues in very fair request, and sells fairly steady at unchanged rates.

WAX.—*Carnauba* rather weaker; 78*m.* to 80*m.* was paid for good grey, and 110*m.* for yellow. *Japan* lower; 92*m.* would now be taken for fine whitish squares.

SAFFRON IN SPAIN.

VALENCIA, May 3.

THE following figures go far to prove that prices for Spanish saffron will in all probability remain high during this summer, and that there is every likelihood that they will also sustain their exceptionally elevated position during the coming season. While the sales last season—*i.e.* from October 16, 1887, until April 30, 1888—were 53,200 lbs., they came, during the same period of 1888–9, to 68,200 lbs. There was on May 1, 1889, a visible stock in the market of only 11,250 lbs.; against 17,000 lbs. in the same period of 1888; while news from the interior of Spain reports the existence of scarcely 8,000 lbs. to add to above figure of stock here, which in any case is less than last year's stock at the same period.

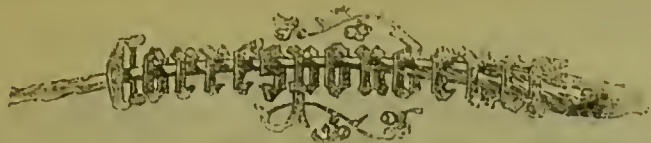
Now, the sales from May 1 to October 15 in 1888 amounted to 23,484 lbs. Should there be the same demand this year, that would not only force prices to rise on account the short stocks, but would leave us, too, at the end of the season without any supply whatever to influence prices of the new crop.

According to the result of the crop, which, however, can only be definitely judged during the time of the collection, on account of the weather then prevailing, prices may be more or less easier in the beginning, but owing to the want of old stock we may look forward to comparatively high prices for all the remaining part of next season.

As far as can be gleaned from the owners of saffron, they are in hopes of being able to raise actual prices during this summer to about 55 pts. per lb. for inferior quality, and 65 pts. for superior.

ASSAY OF COCA LEAVES.

MR. V. D. MARCK reviews in the *Ned. Tijdschr. v. Pharm.* the various methods which have been proposed for the assay of coca leaves, and which are as follows:—(1) Dr. Squibb's consists in treating 50 grammes of the powdered leaves with a mixture of 40 grammes of alcohol and 1.6 gramme of hydrochloric acid; evaporating the extract formed, and treating with 30 c.c. ether, 30 c.c. water, and 1 c.c. of 10-per-cent. hydrochloric acid. After separation of the aqueous portion the ether is again treated with 10 c.c. of acidulated water; the two aqueous portions now mixed, and if the mixture is still green from contained colouring matter it is freed from that with ether before it is treated with sodium carbonate, which sets free the alkaloid. It is taken up with ether, and evaporated. The residue is by no means pure. A second method is that proposed by Castaing. It consists of macerating 50 grammes of the leaves in 400 grammes of boiling water for half an hour, straining, packing the leaves in a percolator, and percolating with rectified spirit. The percolate and infusion are then to be mixed; extractive and colouring matter separated with lead acetate; excess of lead removed with sodium sulphate, and filtered; the filtrate evaporated to a syrupy consistence; the alkaloid separated with sodium carbonate, and extracted with ether. The method of Albertoni and Guareschi (treatment with ether, alkalisied water, and petroleum ether) is faulty, and so is also the French method (extraction of alkalisied leaves with petroleum ether); indeed, all the methods are more or less unreliable. Thus the residue in Squibb's contains 50 per cent. of matter other than cocaine, and Cartain's also gives high results. Mr. V. D. Marck, as the result of numerous experiments, gives the following as a reliable process:—Mix 50 grammes of the powdered leaves with 20 grammes of calcined magnesia, make into a paste with water, and dry at a temperature not exceeding 60° C. Then percolate with ether, and evaporate the percolate to dryness. Treat the residue with about 30 c.c. of 2-per-cent. hydrochloric acid, filter and remove residual colouring matter by shaking with ether; then make the solution slightly alkaline with ammonia, and shake three times with 25 c.c. of ether; collect and dry carefully, finishing in the exsiccator. Ether is better than chloroform for extraction, as the latter requires a greater degree of heat for evaporation, and this is injurious to the cocaine.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

The Policy of Taxing Medicines.

SIR,—I have for a long time, while reading the articles and letters on questions of tariffs and taxes on drugs and medicines, had a burning desire to write you my strong opinions on the subject, but lacking a fluent quill, my gall of bitterness has been withheld from your pages till I can retain it no longer. I am disposed to call by hard names those who invent and legalise taxes and tariffs on medicines; but, as a matter of policy, I let wrath give place to reason, for persecution engenders sympathy for the opposition of those whom reason might convert to the truth.

I hold that as a national policy it is impolitic to tax medicines at all, because their use is to cure the sick and strengthen the weak. The nation—yes, the world—is like a large family. Now when a member of a family is ill, are hindrances placed in the way of the sick one's recovery? On the contrary, unless the suffering member be one of the kind that "never will be missed," every facility is given to make the invalid well again, both on account of affectionate solicitude and from economical considerations; for not only is the invalid by illness prevented from contributing his quota to the commonwealth by labour, but the attention of other members of the family is diverted from their useful occupations to attendance upon the invalid.

The family are glad to give the disabled one his medicines for nothing, and pay doctors' bills, too, in order to have him off their hands and at work as soon as possible, adding to the family stock of wealth. Does not this fairly illustrate the folly of making recovery to health of any member of the community difficult by enhancing the cost of the means of recovery? Are our legislators and railroad men homœopaths, who wish to force their system of small doses upon us by making large ones so dear that we cannot afford them?

Your correspondent "Mercurius" hinted that the medicine-stamp tax, like most other taxes, was invented by landlord legislators, simply in order that the necessity of taxing land values might be obviated, and the unearned increment pass into their possession as a national tribute to them for their trouble in making the laws without pay. That "Mercurius" must be a very wicked person to speak so disparagingly of the nobility, who are all necessarily good men, for, enjoying comfortable incomes, they have no necessity to steal, as poor men sometimes must do, in order to live.

If the railway people were alive to their true interests they would carry medicines for nothing, for the prosperity of a railway depends upon the prosperity of the people. If they are all sick the production of wealth ceases, and traffic falls off or fails altogether, as in seasons of cholera. The repeal of the Medicine-stamp Act would be a benefit to those intelligent and titled gentlemen whose time has now to be spent in the vain endeavour to prove that the law requires everything to be stamped. Instead of these great men wasting their lives in the worse than useless occupation of spying upon and harassing such useful and ornamental members of society as us pharmacists, they might be serving their country as prime ministers or chancellors, members of Parliament, or even chemists.

The Government of India give away thousands of pounds'

worth of medicines every year, and find it good economy to do so. These medicines pay no tax, and the freight on them is also made a present to the sick.

It pays the country much better to give away the medicines and cure the sick quickly, also throwing in the costs of freight, medical advice, and dispensing, rather than have a host of invalids on hand, who not only earn nothing themselves, but who take others from productive occupations to nurse them.

It is hard enough to be sick and unable to earn anything, also to pay doctors' and chemists' bills, when the income is cut off; but on top of this, if the means of cure is increased in cost by special taxes, whether by stamps or Customs tariffs or high freights, the burden becomes still more grievous to be borne, the medicines more difficult, if not impossible, to obtain, and the double harm done the commonwealth of causing a stoppage of the productiveness of the sick ones and also of their attendants.

The policy of making the recovery of health difficult can, therefore, be regarded only as a scheme of national suicide, and all those officials engaged in making medicines dear no better than social barnacles doing their best to hinder the progress of the ship of state, and perhaps to sink her.

Yours for the repeal of the hateful Medicine-stamp Act, and of all Customs tariffs on medicines in every land, also for the reduction of freights on chemicals and medicines,

SILAS MAINVILLE.

Checking the Carriage.

SIR,—Your correspondent "A. H." makes a very wise suggestion in last week's CHEMIST AND DRUGGIST, viz., that wholesale druggists should supply their customers with the weight of the various packages, so that the consignee could check the carrier's sheet; and as it is so simple a matter I hope that wholesale druggists will readily comply with so reasonable a request. In addition to this precaution, I would again urge upon retailers the very great advantage of being in possession of the correct rate of carriage from the various towns from which they are in the habit of having goods, and making an invariable practice of checking both rate, weight, and amount charged. The railway companies are compelled to supply, on request, a copy of the various rates. There is no doubt that it is in the matter of "smalls" that the greatest danger is to be feared to the general body of chemists and druggists, simply because the very great proportion of their consignments come under that head, viz., under 500 lbs. weight; and it is noticeable that in this particular matter the railway companies propose the greatest change. In fact, if their proposals are carried it will be a very serious matter indeed, and will make a still further inroad into the already greatly diminished profits of the poor struggling chemist and druggist. For even supposing the wholesale dealers continue to pay carriage of fair-sized orders, they cannot afford to lose the extra carriage out of their profits, and the result will be a general advance of prices all round. Of course, if better prices could be got from the consumer, so much the better, but—and a very important "but" too—there's the rub. Your report of the discussion on the sub-committee's report is an exceedingly good one, and puts the matter very lucidly before your readers, the report itself reflecting great credit upon the principal workers, Messrs. Francis and Umney, to whom the whole trade is indebted; and I should judge that the great body of chemists will be able to make a very formidable opposition to this last threatened danger to our already heavily handicapped trade.

Faithfully yours,

SODA CARB. (46/25.)

Wine Licences.

SIR,—I shall now emerge out of the region of technicality into the sunshine of fact, and, with your permission, would ask your correspondent to follow.

He says, "My shop is only a part of Glasgow lying in Renfrewshire." While I grant my shop is in Renfrewshire, I cannot admit it is a part of Glasgow; but, seeing Renfrewshire is not large enough for your correspondent, I would ask him to point out any single retail house, not only in the municipal area of Glasgow, but in the whole area of Lanark-

shire, who holds a licence such as I made application for in the Justices' Court of Pollokshaws and Renfrew.

Yours most respectfully,

Glasgow, May 11.

WALTER SLOAN GALBRAITH.

Commercial Travelling.

SIR,—I had hoped ere this a pen far abler than mine would have answered "Manufacturer's" letter, which appeared in your issue of April 20, on the subject of commercial travellers. As one of the small army of ambassadors of commerce, I can fully endorse what has been written by "Anglo-Celt," and however great an evil the commercial fraternity may be, yet they are necessary, and occupy a very important position amongst the industrial pursuits of our vast empire. The particular branch of a chemist's business which I have the honour to represent—viz., medical label and chemists' general printings—might well be conducted through the post; yet the generality of the trade prefer being personally solicited, so that views may be exchanged, ideas imparted, suggestions given, and improvements made, to the mutual advantage both of the chemist and the general public. Five minutes' personal interview will often save hours of labour and endless correspondence, and not unfrequently loss of money, consequent upon delaying a purchase. It was but a few days since, staying over night in an Eastern Counties town, I left my specimen-book of labels, &c., with a person who had previously considered it waste of time to look at my samples. Calling the following day, however, he told me he was surprised to find some of his old friends in different parts of the country making a stir with their own specialities, and, having interrogated me about several of these, he felt disposed to try his hand at one or two new things, which will doubtless prove remunerative to him. But for the traveller and his samples this chemist might have jogged along in the quiet way of the last century. To make commercial travelling successful, it is necessary for the various representatives to be themselves thoroughly conversant with the minutest details of their respective trades, and so adapt themselves to the requirements of their individual customers.

The traveller who is fortunate enough to secure the personal esteem and confidence of his patrons finds his periodical visits are looked forward to with great interest by these customers. Orders are reserved for him out of friendship, for frequently the only knowledge the customer has of a particular firm with whom he deals is through their representative, who by his own personal aptitude has secured the connection for his firm.

Much of the unhealthy competition of the present day, I do not hesitate to say, is caused by the young and often inexperienced representatives of new houses, who are sent out with small salaries and commissions, and who, in order to secure orders to enable them to make a return and retain their situations, bring prices down to their lowest level; and thus the older houses in self-defence are obliged to follow suit, lest these new houses should obtain a hold upon their customers. Whilst, like every other flock, the commercial body have their black sheep, I cannot but think that the representatives of old and reliable wholesale houses will still continue to be important personages in the annals of commerce.

Yours faithfully,

7 Park Place, Exeter,
May 11.

HENRY J. DALGLEISH.

The Moonseed Bitters Contract.

Another *Yorkshireman* (49/5) suggests that "Yorkshire," who last week complained of the failure of Messrs. Powell's system, because, as he showed, Taylor's Drug Company, of Hull, were advertising the article "at reduced prices," asks if "Yorkshire" has tested the matter. He tells us that a customer, who bought the article from him, told him she had got it previously from Taylor's, but that they had kept her waiting for a fortnight, and then at last told her they could not get it any more, because they would not sign an agreement not to undersell.

Peltatim (49/7), who writes from the West-end of London, says he knows two houses in London (outing chemists

doing a large business) who sell the Moonseed preparations at reduced rates.

Syr. Ferri Lemonad.

SIR,—Your reply to "East Anglia" on page 664 of last week's issue is, I think, incorrect. Lemonade iron, or, in its latinised form, syr. ferri lemonad., was introduced by Professor Goodell, and its formula is:—

Tinct. ferri chloridi	3iv.
Ac. phosphor. dil.	3vj.
Spiritus limonis.. .. .	3ii.
Syrupi ad	3vj.

M. A dessertspoonful in water after meals.

See Wright's *Medical Annual*, 1887. Spiritus limonis is, of course, that of the U.S.P.

Yours truly,

11 Grey Street, Newcastle.

T. MALTBY CLAGUE.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Lanolin Lotion.

Ebor (43/45) asks how the following may be dispensed:—

Lanolin. purificat.	3ij.
Glycerini	3ij.
Acid. boracic.	3ij.
Spt. vin. rect.	3iv.
Aq. rosæ ad	3viij.

M. Ft. lotio.

Thymol Spray.

In reply to "Dispenser," the best suggestion I can offer is to send the spray out in a 3j.-bottle, giving patient directions to use 3xij. hot water, thymol being soluble in hot water.

PERSE VERE. (48/42.)

A Carbolic-acid Pill.

Country Cousin (43/41) would be glad to know the best way of dispensing the following, and also what varnish should be used. Ordinary mastic and alcohol varnish is not suitable:—

Acid. carbolic.	gr. 48
Glycyrrhizæ	gr. 36
P. tragac. co.	q.s.
Glycerin.	q.s.

Misce et divide in pil. 24. (Varnish.)

[Mix the carbolic acid (absolute) with 30 grains of liquorice, 10 grains of powdered curd soap, and 12 grains of compound tragacanth powder; then add a few drops of glycerine, and beat well into a mass. Tolu and ether varnish would be suitable, especially if it had a coat of gelatine above it. See "The Art of Dispensing" on this point.]

LEGAL QUERIES.

45/45. *Dentorum*.—To ascertain whether a particular title has been registered as a trade-mark, a search, costing 1s., must be made at the Trade Marks Office, Southampton Buildings, Holborn. We cannot undertake this work for correspondents.

44/71. *Puzzled*.—We cannot explain reports which appear in other journals.

48/24. *Saponis*.—We should think the "rubbing bottle" as labelled would be held to be liable to medicine-stamp duty if it came before the Board. If you abandon the proprietary style of the title on the label it would not, we should think, incur liability.

49/2. *Pruni Virg.*—We have reported a number of cases of prosecution in regard to milk of sulphur. When properly defended, the sale of the ordinary lac sulphuris has always been justified, if milk of sulphur was asked for; but there are, no doubt, still existing some analysts who think the precipitated sulphur ought to be sold for the article, and it is always possible they may recommend a prosecution when the other article is supplied.

48/20. *Jam.*—There is nothing illegal in anyone extracting teeth, or announcing that he does so.

48/14. *Brighton.*—A registered veterinary practitioner, not being M.R.C.V.S., has equal rights with the latter as to the recovery of fees in a court.

47/20. *Bretal.*—If a chemist undertakes to dispense a prescription, and through incompetence dispenses it incorrectly, he would, no doubt, be legally liable for damages resulting, if such could be proved. Of course the fact that the lady was ill *after* taking the medicine is not conclusive evidence that she was ill *because* she took the medicine. It may be, too, that the prescription was carelessly written, and that the fault lies with the prescriber. You do not give us facts whereon to base an opinion. The homœopathic preparation you name would be, we should think, "tinct. merc. cor.," but you should have sent a tracing of the original.

Master and Apprentice.—*A Perplexed Chemist* (45/9) says:—I took an apprentice for three years, a premium of 35*l.* to be paid in three instalments, one each year. The indentures were drawn up by a solicitor and stamped, I paying half the expense. For the first six months I allowed the apprentice time in the afternoon and evening to prepare for his Preliminary examination; he went home for three weeks and passed. Four months after he absconded, and his father placed him with another chemist. I applied for a summons and was refused, being told that I must wait till the next instalment is due, and then sue the father for that and for breach of agreement. On the face of it, indentures for a chemist do not seem of any good, as I have only received the amount of 10*l.* 4*s.*, and just when the boy ought to be of some use he absconds.

[The master can bring an action against the party with whom the apprentice now is for enticing him away where there is a valid contract for apprenticeship, as there appears to be in this case (*Cox v. Muncey*, 6 C. B. N. S. 375). An action also lies for harbouring an apprentice, after knowing him to be such (*Rex v. Edward*, 7 T. R. 745). These actions can, of course, be brought at once. It was decided in the case of *Foster v. Stewart* (3 M. & S. 191) that a master is entitled to maintain an action for the work and labour of his apprentice against persons harbouring him after his desertion. (See also *Lightly v. Clouston*, 1 Taunton 112.) It would seem to be desirable not to commence an action against the parent for damages on the covenants in the indenture until after the instalment of premium is due, as it was decided in *Lewis v. Peachey* (1 H. & C. 518) that the damages only go up to the time of the commencement of the action, which is treated as putting an end to the apprenticeship. The indenture, however, is not put an end to by the fact of the apprentice absenting himself (see *Smedley v. Gooden*, 3 M. & S. 189). Under the Employers and Workmen's Act, 1875 (38 & 39 Vict. ch. 90, ss. 6 & 7), powers are given to justices with regard to apprentices, "as if the dispute were between an employer and a workman," and a Court "may make an order directing the apprentice to perform his duties under the apprenticeship;" and "may, if it thinks it just so to do, order the whole or any part of the premium paid on the binding of the apprentice to be repaid."

"Where an order is made directing an apprentice to perform his duties under the apprenticeship, the Court may from time to time, if satisfied after the expiration of not less than one month from the date of the order that the apprentice has failed to comply therewith, order him to be

imprisoned for a period not exceeding fourteen days." The Court may, too, order any person liable under the instrument of apprenticeship for the good conduct of the apprentice to pay damages for any breach of the contract of apprenticeship to an amount not exceeding the limit (if any) to which he is liable under the instrument of apprenticeship. A civil action, however, would be the most remunerative, supposing, of course, that the parties sued are worth powder and shot.]

50/25. *W. H. J.*—We have published probably fifty reports of the Hop Bitters cases and references thereto. The preparation you name was well known to the litigants. We do not see any legal objection to your letter.

MISCELLANEOUS INQUIRIES.

*A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4*d.* each.*

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

48/25. **Infant's Food.**—See page 94 of the current volume.

45/2. *Jacques.*—We do not know of any London agents for either of the journals named. You can probably see them in the Pharmaceutical Society's library.

49/5. *Bell.*—You should get the examination papers and judge for yourself. An apprentice of the Pharmaceutical Society is one who pays half a guinea annually to the funds.

49/12. *B. W.*—We should think that the salt-stains in the hides would be removed during the liming process if they are due, as we suppose, to the liberation of chlorine or an oxy-acid of chlorine.

49/14. *Benoni.*—The old lac sulphuris mixes better, that is the reason why we recommend it for hair-restorer. Very little of the sulphur combines with the lead, so that 99 per cent. of what is used may be said to be in excess.

49/25. *Yorks.*—If you wish to Perfume a Theatre your plan is to apply to the manager. The *quid pro quo* you must arrange for yourself. The arrangement generally come to is somewhat as follows:—The chemist perfumes the theatre (a lad and a spray-producer, used about an hour before the performance, do that); in return (1) the fact is notified on the programmes, and (2) the chemist gets permission to sell the perfume in the theatre during the performance. The second part is the one which you must be careful about. Some managers demand as much as 25 per cent. of the returns, while others consider the expense of perfuming the theatre a full return for the privilege they extend to the chemist. There must now be a good number in the trade who have experience in this matter. Perhaps some of them might communicate with us for the general good.

49/6. *A. P. S.*—If the suppositories are made with a gelatine basis they will become perfectly insoluble. Let the prescriber know this, and suggest a theobroma basis. The "Art of Dispensing" fully explains.

Gapes in Fowls.—The Secretary of Jeyes' Sanitary Compound Company (Limited), referring to a paragraph in this section last week, directs our attention to the value of that company's preparations in cases of gapes in hens and of canker in pigeons. They enclose copy of a letter from a pigeon-fancier, who says he has been successful with the "Perfect Purifier" in three cases of canker among his pigeons—about twenty drops in a tumblerful of water, well mixed, and holding the bird in the hand with its beak in the water for a short time.

44/63. *W. J. Pinchen.*—We should consider **Soluble Essence of Peppermint** to be (consistent with the strength) an impossibility. If you take, say, a 1-in-8 essence, and treat it for several days with a twentieth of its weight of light carbonate of magnesia, and filter, the essence will, no doubt, have increased in miscibility. But, why? Because the magnesia has removed a goodly proportion of the essential oil.

45/62. *Saline.*—We suggest the following formula for a **Tonic Saline** :—

Bicarbonate of soda	..	..	..	17 oz.
Tartaric acid	..	..	..	13 "
Citric acid	..	..	..	2 "
Sulphate of quinine	..	..	..	28 grains
Citrate of iron and ammonia	..	..	..	168 "
Iceing sugar	..	..	..	20 oz.
Granulated sugar	..	..	..	4 "

Mix the quinine, citrate of iron, and the granulated sugar together, and reduce to a uniform powder; then mix with the other powders, and sift.

45/33. *Royal.*—If you do not find **Mistura Creosoti**, B.P., suitable, try the following :—

Creosote	..	..	..	3 minims
Brandy	..	..	..	½ drachm
Syrup	..	..	..	1 "
Cinnamon water to	..	..	..	1 oz.

Mix.

279/36. *Nunquam.*—(1) We have given many methods for the **Removal of Warts** during the past two years, as a reference to the indexes of the volumes for the period will show. In most cases the application of strong nitric acid morning and evening, preceded by judicious paring, removes the excrescence, the final treatment being the application of salicylic plaster. (2) The addition of a solution of potassium permanganate (B.P.), in the proportion of 1 oz. to the gallon (afterwards filtering), materially improves the odour of **Rectified Spirit**, so as to make it suitable for perfumes; but the only way to get rid of the higher alcohols is by rectification. Have you tried the triple-distilled spirit advertised in this journal?

46/7. *A. T. R.*—Britten's "Dispenser's Vade Mecum" is out of print. Messrs. J. & A. Churchill were the publishers.

48/27. *Gardener.*—Use bay-salt for destroying the weeds in garden paths.

48/32. *Nitrate.*—**French Polishers' Glaze.**—What polishers use for the final gloss is boiled linseed oil and methylated spirit, alternately applied. As a substitute, you might give the following :—

					Oz.
Boiled linseed oil	..	..	..	..	5
Yellow resin	..	..	..	..	1
Turpentine	..	..	..	..	8

Macerate until the resin is dissolved, and strain.

45/22. *An Old Etonian.*—For counter-prescribing read Begbie's "Medical Information"; your pharmaceutical knowledge will supply what it does not give. For teeth-extracting read Barret's "Dental Surgery." (Lewis, 3s.)

46/13. *A. A.*—(1) **Essence of Lemon.**—Oil of lemon mixes with absolute alcohol in all proportions. A commonly sold essence is made as follows :—

Oil of lemon	..	..	..	..	1 oz.
Light carbonate of magnesia	..	..	..	..	1 drachm
Rectified spirit	..	..	..	..	7 oz.

Mix and shake occasionally during the day, and filter.

If water is added to this a portion of the oil will be precipitated. (2) **Essence of Rennet.**—Several formulæ are given in the last two volumes. Here is one of the best :—

A calf's rennet ent small and sifted through

No. 4 sieve					
Common salt	..	..	..	..	8 oz.
Rectified spirit	..	..	..	..	8 "
Sherry	..	..	..	..	6 "
Water	..	..	..	..	120 "

Macerate seven days, shaking occasionally; drain on a fine sieve, and shake up with a few ounces of fuller's earth, which will clear the essence and make it easier to filter.

(3) **Marshmallow Ointment** (factitious) is made from palm oil, ½ lb.; yellow resin, 1½ lb.; yellow wax, 2½ lbs.; pale linseed oil, 1 gallon. The real thing is composed of oil of mucilages, 2 lbs.; yellow wax, ½ lb.; resin, 3 oz. Melt and add ½ oz. of venice turpentine, stirring until the ointment cools. **Oil of Mucilages** is made by boiling ½ lb. of marshmallow and 3 oz. each of bruised linseed and fenugreek in a quart of water for an hour, then add 2 quarts of olive oil and boil until the water is dissipated. Then strain.

45/15. *Starch.*—**Graph Composition** is made with gelatine 1 part, water 2 to 3 parts, and glycerine 1 part.

42/44. *E. C.* asks :—"What is the probable nature of the needle-shaped crystals which have formed on some very old extract of belladonna?" Potassium chloride, we should think, as the extract contains from 12 to 20 per cent. of inorganic matter, three-fourths of which is potassium chloride. When the extract dries this would crystallise out.

47/17. *A. C. P.*—We have seen nothing of the pills, but we shall make inquiry.

47/29. *W. C.*—We do not know any powder called "pulv. chlor. co."

48/41. *Jaborandi.*—The preparations are simply fluid extracts of meat; some contain the dried fibrin of the meat suspended in the fluid. Salt as a preservative is an important constituent.

48/54. *Country Bumpkin* is anxious to learn the experience of others in the trade regarding the suitability of hellebore as a substitute for insect powder. A very little experience ought to satisfy one that the two substances are in no way related to each other. Hellebore is a poison, and dangerous; insect powder, an intoxicant, and practically innocuous to animals.

48/5. *Senex.*—The continuous use of a solution of lime (say, 1 oz. of saccharated solution of lime in 9 oz. of distilled water) is the only thing we can suggest for **Turning Black Hair Grey.**

48/1. *Convallaria.*—**Lily of the Valley Perfume.**—The following formula is from a back volume :—

Extract of jasmieue	..	..	..	..	20 oz.
" ylang-ylang	..	..	..	..	3 "
Cardamom seeds	..	..	..	..	1 "
Oil of orris flower	..	..	..	..	10 drops

If the eardamom odour is too distinct neutralise it with jasmine.

PALATABLE TONIC LAXATIVE.

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Prepared with the finest sweetened Eating Chocolate, the proportion of the active ingredient being carefully adjusted so that each Tablet or Bonbon contains a dose equivalent to twenty minims of the Fluid Extract of Cascara. The Tablets are of such a form that they can be easily divided, should a smaller dose be desired; and *the taste can hardly be distinguished from that of ordinary Chocolate.*

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—, M.R.C.S.

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INCOMPARABLY THE BEST AND MOST ECONOMICAL.

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"**PURE** & unmixed,"
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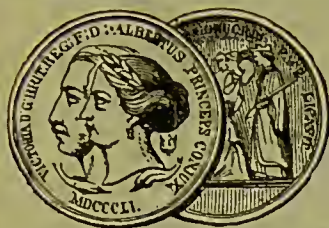
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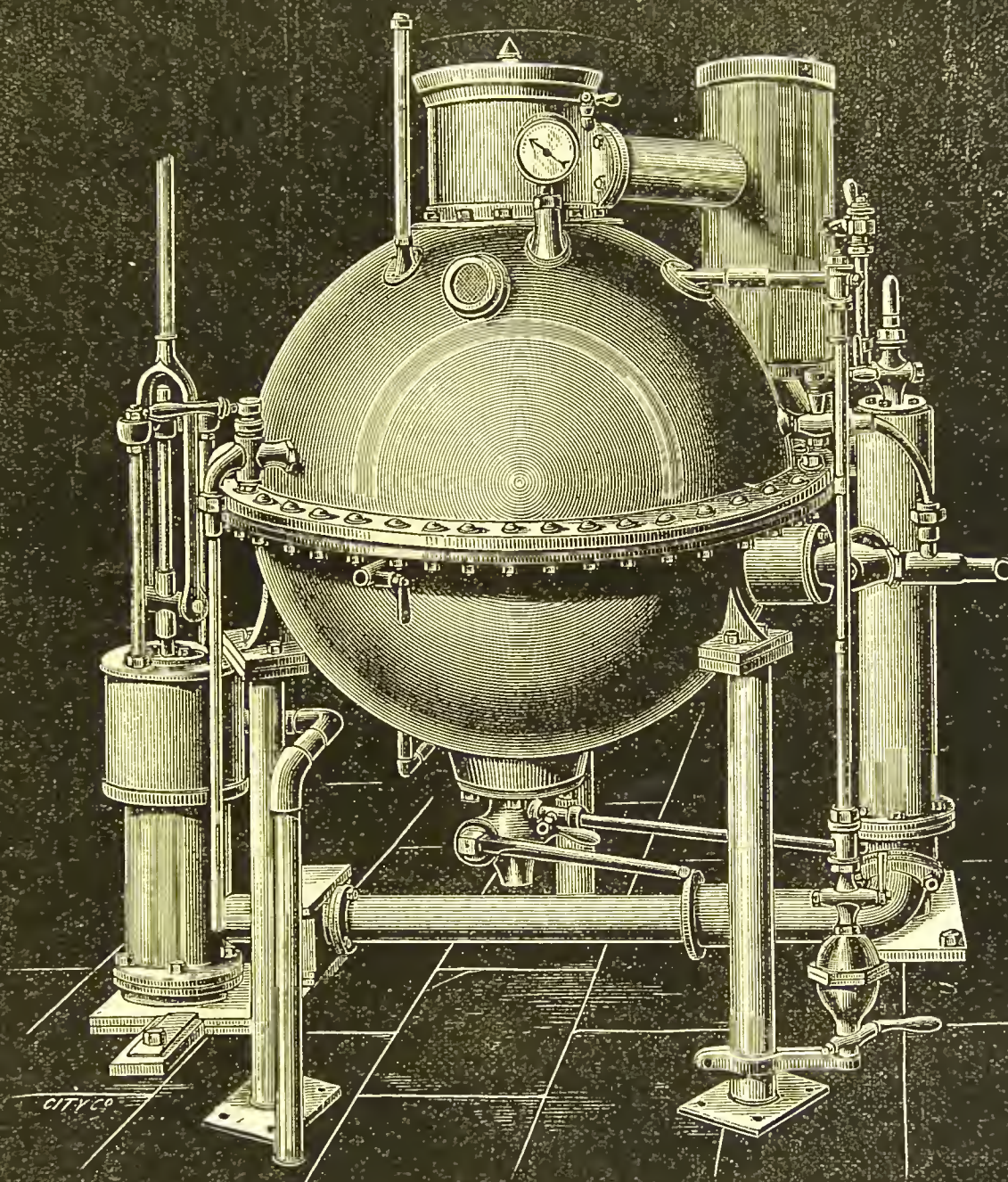
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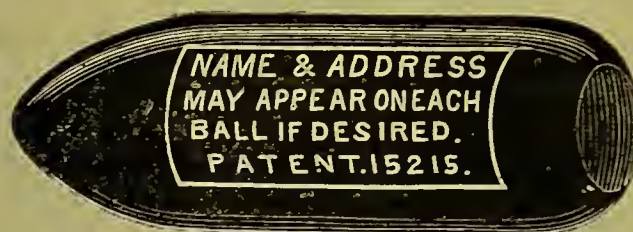
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In Summer time, and in warm climates, it is invaluable, as it cools the Blood and improves the system generally

It is the only known Drug which cures that most unpleasant of all maladies, viz., a HEADACHE. In cases of Gout and Indigestion it is indispensable.

AND IN THE NURSERY IT IS INVALUABLE. SPOKEN OF MOST HIGHLY BY ALL THE PROFESSION

Sold by all respectable Chemists, in Large sized Bottles (the 1s. size containing nearly Double the Quantity usually sold at that price), at 1s., 2s. 6d., and 3s. 6d. each. Also in Winchester Quarts for Dispensary and Hospital use.



CAUTION.—Observe the SIGNATURE of the Inventor on EVERY LABEL.

SIR JAMES MURRAY & SON, CHEMICAL WORKS, TEMPLE ST., DUBLIN.

Wholesale Agents—BARCLAY & SONS, 95 Farringdon Street, London.

"The Popular Winter Medicine and Non-Alcoholic Stimulant."

COMPOSITION ESSENCE.

Unequalled for its AROMA and STRENGTH.

9d. per lb. in Winchester Quarts; and 8d. per lb. in 10 Gallon Casks. 5 per cent. discount

RAIMES & CO., Wholesale Druggists, YORK & EDINBURGH

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.

JOHN OAKEY & SONS,

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Emery Wheels, Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

OAKEY'S WELLINGTON KNIFE POLISH,

Prepared expressly for Oakey's Patent Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Canisters with perforated Tops to prevent waste, at 1d., 2d., 3d., 6d., 1s., 2s. 6d., and 4s. each.

OAKEY'S NON-MERCURIAL SILVERSMITH'S SOAP,
For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKEY'S "POLYBRILLIANT" (Registered).

▲ Magic Pomade for Cleaning Brass, Copper Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Pastes. Tins 1d., 2d., 3d., and 6d. each.

WELLINGTON BLOCK BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.

Highest award and Prize Medal, Philadelphia Exhibition, 1876; and Boston, 1888. Gold Medal, Crystal Palace, 1884

"CUTTING COUNTERACTED."

MOONSEED BITTERS brings FULL PRICES.

WHY?

Because every one who retails Moonseed Bitters has to sign an Agreement or Contract in the following terms:—



MOONSEED BITTERS.

Above is Facsimile of
THE WRAPPER LABEL
of the 2/9 size.
It is also sold at 4/6.

MOONSEED OINTMENT.

Retails at 1/1½, 2/9, 4/6 per box.

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets.

A. E. POWELL & CO., SWINDON.

WE REPLY TO OUR CRITICS.

The announcement made to the Trade through THE CHEMIST AND DRUGGIST on January 26th last immediately absorbed attention, and, as is always the case with novel movements, a little scepticism. For example, some critics tried to knock the bottom out of our scheme by saying that our goods could be obtained through ordinary channels at the ordinary rates. To that we reply that:—The scheme commenced on March 1st, when we hoped all the Wholesale Houses would have their stocks of the MOONSEED BITTERS and OINTMENT exhausted. From that date we start fair, and we shall do our very utmost to prevent cutting and protect the Trade. Recently some Chemists have, through the columns of THE CHEMIST AND DRUGGIST, done their best to belittle the scheme which we propose. We HAVE AN ANSWER TO EVERY CRITICISM, and here are a few:—

What Critics say.

- (1) Messrs. Powell's proposals will not help the chemist very much in solving the question as to "retail prices of patents," seeing that the large advertisers could not, if they would, adopt their methods.
- (2) Messrs. Powell's method cannot be adopted by others.
- (3) That traitors will kill the scheme.

Our Reply.

We are among the largest advertisers. We have initiated the method, and if all other makers of Proprietary preparations had done the same in the early days of their success cutting would never have been heard of. What we are anxious to do now is to ensure that every bottle of Moonseed Bitters and every box of Moonseed Ointment will be sold at the full advertised prices. "A little leaven leaveneth the whole." In time all Proprietors of Patent Medicines may adopt our method. Is this not what the trade wants?

We are not particularly anxious to have our original device stolen by our rivals, but there is no reason why they should not adopt a similar scheme, and with the determined support of the trade success is certain.

Our reply to that is short. No traitor survives starvation, and those who violate the bond receive no more supplies. Traitors violated our unstamped papers, and for that reason we threw them open to the trade from June 1888 to March 1889.

We respectfully call the attention of the Drug Trade to the Terms of the Agreement as given on the opposite page, and ask their support in maintaining prices, and in extending the profitable sale of the article.

[2]

A. E. POWELL & CO., SWINDON.

NEW ZEALAND.

KEMPTHORNE, PROSSER & CO.,

NEW ZEALAND DRUG COMPANY, LIMITED,

Wholesale Druggists,

MANUFACTURING CHEMISTS, AND COMMISSION MERCHANTS,

Head Office and Factory, DUNEDIN.

BRANCH HOUSES:

High Street, CHRISTCHURCH,
Hunter Street, WELLINGTON,
Shortland Street, AUCKLAND,

Patent and Proprietary Medicines Agency.



NEW ZEALAND.

London Agents—

Messrs. GRIMWADE, RIDLEY & Co., 82 Bishopsgate Street.

FOREIGN SPECIALITIES & MEDICINES.

REVISED PRICE LIST.

ROBERTS & CO.

FOREIGN AND ENGLISH CHEMISTS,

WHOLESALE, IMPORT, AND EXPORT AGENTS FOR

FOREIGN MEDICINES AND PATENTS,

76 NEW BOND STREET, LONDON.

Messrs. Roberts & Co. beg to inform the Trade that they are Agents for all the principal French and Foreign Specialities and Medicines, a large supply of which they have always on hand, and can supply on very favourable terms. They are in daily communication with their Paris House, and can offer exceptional facilities for procuring New Medicines, &c., &c., with very little delay. The following is a list of a few that they name *au hazard*, any that have a large sale:—

Retail	Per doz.	Retail	Per doz.	Retail	Per doz.	Retail	Per doz.
4/6..Alcool de Menthe Ricles	41/5	4/6..Capsules Matico	36/	2/3..Guyot's Goudron	18/	7/0..Rabuteau's Elixir Ferrug.	65/
2/9..Ditto ditto	21/3	4/6.. " Raquin	36/	11/..Laville's Gout Tincture	91/10	2/9.. " Sirop	24/4
2/9..Aubergier's Syrup	26/3	4/6.. " Mathey Oaylus	27/	11/.. " Pills	91/10	4/0..Raoahout	31/
2/9.. " Pâte	15/4	4/6..Ohassaing's Wine	38/9	2/3..Papier Fayard	13/6	4/6..Reynal's Bougies	37/10
6/6..Bay Rum	57/	2/9.. " Pills	24/4	1/1 1/2..Ditto	7/3	2/9..Ricord's Injection	24/4
5/6..Ditto	31/	4/6..Olin's Bromide Cam. Dragées	45/	4/..Papier Fruneau	24/4	4/6.. " Capsules	36/
2/..Belloo's Charcoal	15/4	5/..Eau Botot (Genuine)	40/1	2/3..Ditto	14/5	9/.. " Syrup	90/ ; 4/6 ; 42/
1/9.. " Lozenges	14/5	3/..Ditto	24/4	1/9..Pâte Aubergier	15/4	1/6..Star Paper	11/
4/6..Blancoard's Pills	32/5	2/6..Espic's Cigarettes	13/6	1/9.. " de Berthé	15/4	2/9..Vallet's Pills	22/6
2/6..Ditto	18/	6/..Elixir de Coea	56/9	2/9.. " de Ooca	24/4	1/9..Ditto	14/5
8/..Bron's Injection	27/	2/9..Flon's Syrup	22/6	1/9.. " de Georgé	14/5	4/6..Veloutiuc (White, Pnk, Yel.)	37/1
8/..Bngeaud's Wine	38/	2/..Gayetty's Paper	15/4	1/1 1/2..Ditto	9/	3/6..Ditto ditto	27/
4/..Bully's Vinegar	32/5	2/3..Granules Arsen. Acid	13/6	1/6.. " de Nafé	13/6	2/9..Vichot's Trochisques	21/8
2/..Ditto	16/3	2/9.. " Iron	14/5	1/9.. " Regnauld	14/5	4/6..Valentine's Meat Juice	38/
4/8..Candé's (Lait Antéphilique)	39/8	2/9.. " Soda	15/4	7/..Pierlot's Valerian	59/5	4/6..Vin de Coea Mariani	39/8
4/8..Capsules Bromide Camph.	45/	2/9..Grimault's Syrup Lime	23/5	2/9..Rabuteau's Drgées Ferrng	24/4		

Special Quotations in large quantities.

MM. Roberts & Cie. ont l'honneur d'informer MM. les Pharmaciens Spécialistes de France et de l'Etranger qu'ils se mettent à leur disposition pour des dépôts qu'ils voudraient établir à Londres. On peut avoir tous renseignements en s'adressant à leur maison de Londres ou à Paris.

SPECIAL AGENTS FOR MARIANI'S ELIXIR, EXTRACT PATE, PILLS, SYRUP AND WINE OF COCA, AND FOR VALENTINE'S MEAT JUICE AND LE GRAND'S ORIZA PERFUMERY.

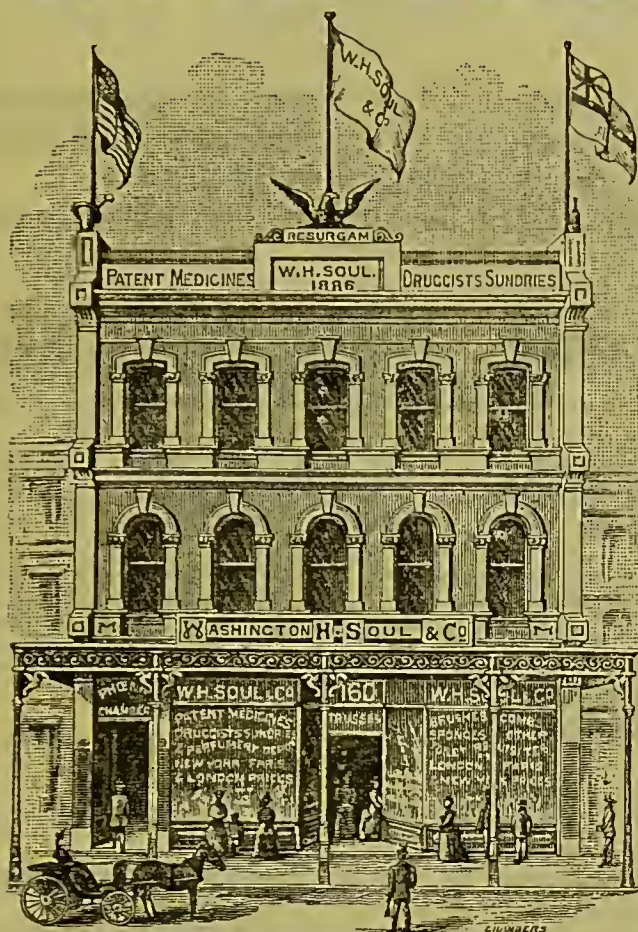
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House in Paris: ROBERTS & CO., Rue de la Paix 5.

[1823.

NEW SOUTH WALES.

W. H. SOUL & Co.



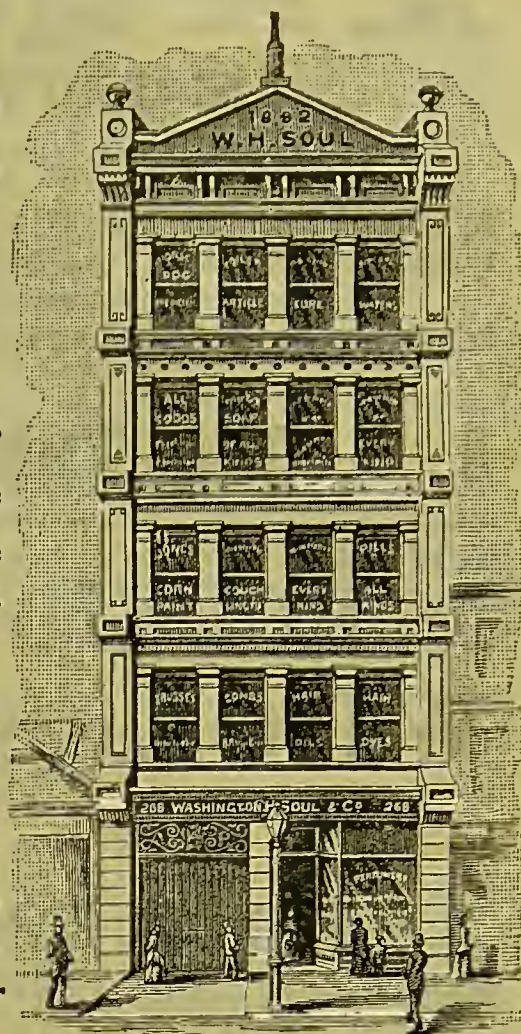
7 DOORS FROM KING STREET.

s. 158, 160, 162, & 268
PITT STREET,
SYDNEY, N.S.W.

Will be pleased to
fill any lines from their
large Stock, which the
Trade may be unable
to obtain from their
usual Jobbers.

TERMS CASH.

*W. H. S. & Co. can arrange
with pushing Houses to receive
Goods on Commission for
prompt Sale in this Colony.*

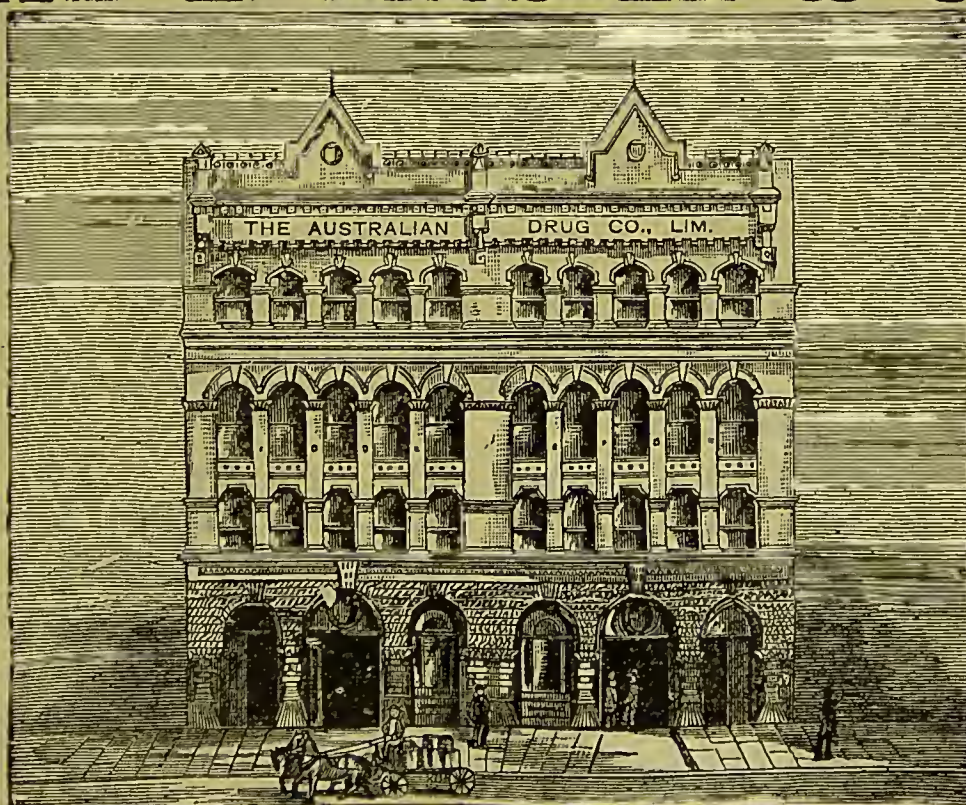


4 DOORS FROM PARK STREET

NEW SOUTH WALES

THE AUSTRALIAN DRUG CO., LIM., LATE E. PROSSER & CO.,

IMPORTERS OF PATENT MEDICINES, DRUGGISTS'
SUNDRIES, DYE GOODS,
SURGICAL INSTRUMENTS, PERFUMERY,
FANCY SOAPS, SPONGES.



IMPORTERS OF BRUSHWARE, CORDIAL MAKERS,
MACHINERY, CORKS, BOTTLES, LABELS,
PHOTOGRAPHIC CHEMICALS AND MATERIALS.

Wholesale Druggists, 19 & 21 O'Connell Street, SYDNEY.

Agencies for Patent Medicines and other Goods solicited. Travellers cover New South Wales and Queensland.

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(For 13 years with Berkley, Taylor & Co, Wholesale Druggists.)

Approved samples will be received, placed in showroom, and the Colony of Queensland thoroughly worked by competent travellers. Commission to be agreed upon and to be credited on all orders sent directly or indirectly through my efforts.

Consignments received and handled to best advantage. Satisfactory English and Colonial references given.

A. R. QUALTROUGH, BRISBANE, QUEENSLAND.

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ROCKE, TOMPSITT & CO.,

WHOLESALE DRUGGISTS,

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Samples and Quotations solicited.

Agencies undertaken on the most advantageous terms.

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Granulated, effervescent.

In cases containing 100 bottles £5

DOSIMETRIC GRANULES, in boxes of 10 tubes.
SOLUBLE "LENTILLES" (Lentil-shaped pastilles),
for Hypodermic Injection.

Gustave Chanteaud's special syringe for using the Soluble
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Triturated "Lentilles" for administration by the mouth.

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General Prices Current and conditions of sale furnished
on application.

PURE CARBONATE OF LITHIA

Price 1,400 fcs. per 100 kilos., or £27 15s. per cwt.

Also all other LITHIA SALTS.

Iodoform, Mercurial Salts, Osmic Acid, Liquid Chloride of
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Our Extra Steam Refined
Oil is treble distilled and
twice rectified by steam, by
an entirely new process and
in apparatus of our own
invention, by which all
these polymeris products

Our Extra Steam Refined quality, is in firm, hard, dry and snowy white crystals, entirely free from oily contamination (and therefore of the highest melting point.) As the original and largest manufacturers in the world of the true Japan Menthol, we guarantee our brand to be absolutely pure. Beware of substitutes. For full particulars, therapeutic uses, etc. see special circulars to be had on application.

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of a tarry and resinous nature which are objected to by some consumers are extracted. It is of water white colour, retaining its full aroma, pungency and strength and guaranteed absolutely pure and soluble in spirits of wine.

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1868.

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Cod Liver, Fish and Orange Oils, Vegetable Wax and Isinglass.

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WHOLESALE DRUGGIST & SUNDRYMAN,
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E. MERCK, Alkaloids and Glucosides.

GUSTAV LOHSE, Lily of the Valley Perfumery.

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Correspondence invited. Special facilities for introducing
new lines.

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CHEMISTS, DRUGGISTS,
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GENERAL MERCHANTS,
LUCKNOW, OUDH, INDIA,

Possess exceptional facilities for the
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We make a full line of RESINOIDS, such
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MIN, IRISIN, HYDRASTIN, &c., ALL PURE.

So-called Concentrations are in the market, called by the same name a
manufactures, that are made by triturating extracts etc., with sugar
of milk, powdered root, etc.

WHAT ARE CONCENTRATED TINCTURES?

They are not made from the crude material, but by dissolving the
active principles in Alcohol in definite proportions, and
invariably represent a uniform amount of therapeutic power.

Send for printed matter on CON. TINOT. AVENA SATIVA in the
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Medical Profession, citing cases under their charge, treated by it; also
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AGENCIES for First-class Firms undertaken.

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Principals visiting England this Summer can receive information as to terms,
&c., on application to above address, or correspondence will receive prompt
attention.

PATENT AUTOMATIC

PILL PICKING MACHINE.

All kinds of Pills Picked and Sorted with
QUICKNESS, ACCURACY, and ECONOMY.
Hand-picking dispensed with, and the finished sample much
improved. All Pills *above* or *below* the Standard size and all
imperfect in shape rejected.

FULL INFORMATION AND PRICES FROM

HERBERT & HUBBARD,
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MAKERS OF SPECIAL MACHINERY FOR THE DRUG TRADE.

COCKING'S ADAPTABLE PORO-PLASTIC JACKETS AND SPLINTS.

Patentee and Sole J. T. COCKING, PLYMOUTH.
Manufacturer,

Cervical Jacket, No. 1. Cervical Jacket, No. 3.

INSTRUCTIONS
FOR MEASUREMENT.

JACKET

(in cases of slight deformity)

Circumference at axilla.

" waist.

" hips.

Length from axilla to great

trochanter.

In severe angular cases circum-

ference over apex of curve, position

of ditto, and contour should

be given; in lateral cases a

description of the case.

In all cases it must be stated if

for male or female.

CERVICAL JACKETS.

Same measurements required,

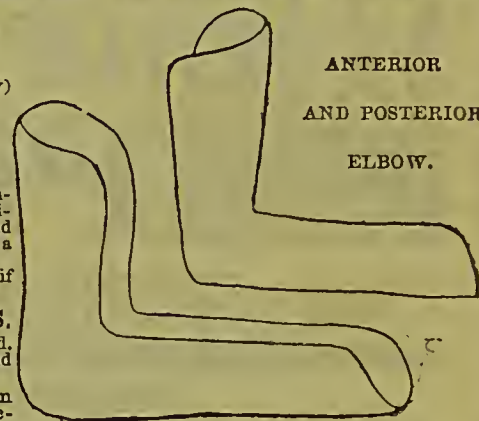
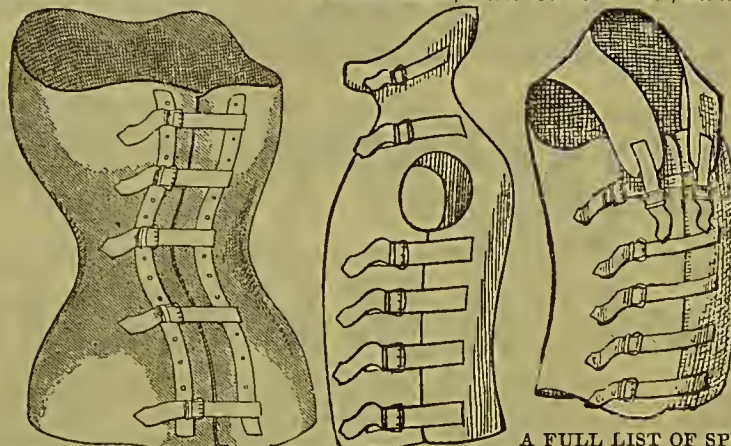
and circumference at neck, and

length from neck to axilla.

Any part of the Jacket can

in the process of manufac-

ture be left soft.



A FULL LIST OF SPLINTS AND PORO-PLASTIC IN SHEETS MAY BE HAD ON APPLICATION.

THE SURGEONS' LINT,

V.B. QUALITY.

The superior quality of Newsome's Absorbent Surgeons' Lint is universally admitted. The V.B. quality is quite pure and of great superficial area
and exquisite softness. The C., D., E., and F. qualities are equally pure and absorbent; E. is stronger in fabric.

NEWSOME'S BLEACHED ROLLED BANDAGES, 3 in., 2½ in., 2 in. Also SURGICAL ABSORBENT OPEN BANDAGES

Specially Bleached & Grey Carded Cotton Wools, Absorbent & Bleached & Grey Waddings; also Sheet Waddings, Tow, &c.

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[BRADY & MARTIN]

A PREPARATION OF CERIUM OXIDE (CAREFULLY PURIFIED)
IN COMBINATION WITH CITRIC ACID AND AMMONIA

DOSE—3 j DILUTED.

EQUIVALENT TO A FULL DOSE OF CERIUM OXALATE



PREPARED ONLY BY
BRADY & MARTIN
NEWCASTLE-ON-TYNE

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LIQUOR CERII

(BRADY & MARTIN)

See Advertisement, January 26, 1889, page 119. Also Circular stating Uses of
Cerium, Testimonials, &c., post free on application to Brady & Martin.

Sold only in bottles with **BRADY & MARTIN'S**
Registered Trade Mark on the Label and over
the Cork.

8 oz., 16 oz., and 32 oz., each 2/6, 4/, and 7/6.

Physicians are respectfully requested to write on prescriptions—

Liquor Cerii "Brm"



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O. E. STUART, B.S.O.

& MARTIN,

WHOLESALE DRUGGISTS, MANUFACTURING PHARMACISTS, AND ANALYTICAL CHEMISTS,
NEWCASTLE-UPON-TYNE.

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TO THE MANUFACTURES OF THE
SEABURY PHARMACAL LABORATORIES
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SEABURY & JOHNSON

MANUFACTURERS OF

PLASTERS

of every description, and in the
most approved forms.

Also,

ABSORBENT COTTONS,

Plain and Medicated,

Rolled in Cartoons of $\frac{1}{2}$ oz. to 16 oz.*Bandages of every description.***ABSORBENT LINT,**

Plain and Medicated.

ABSORBENT GAUZES,

Plain and Medicated.

Oiled Silk, Oiled Muslin,

Mead's

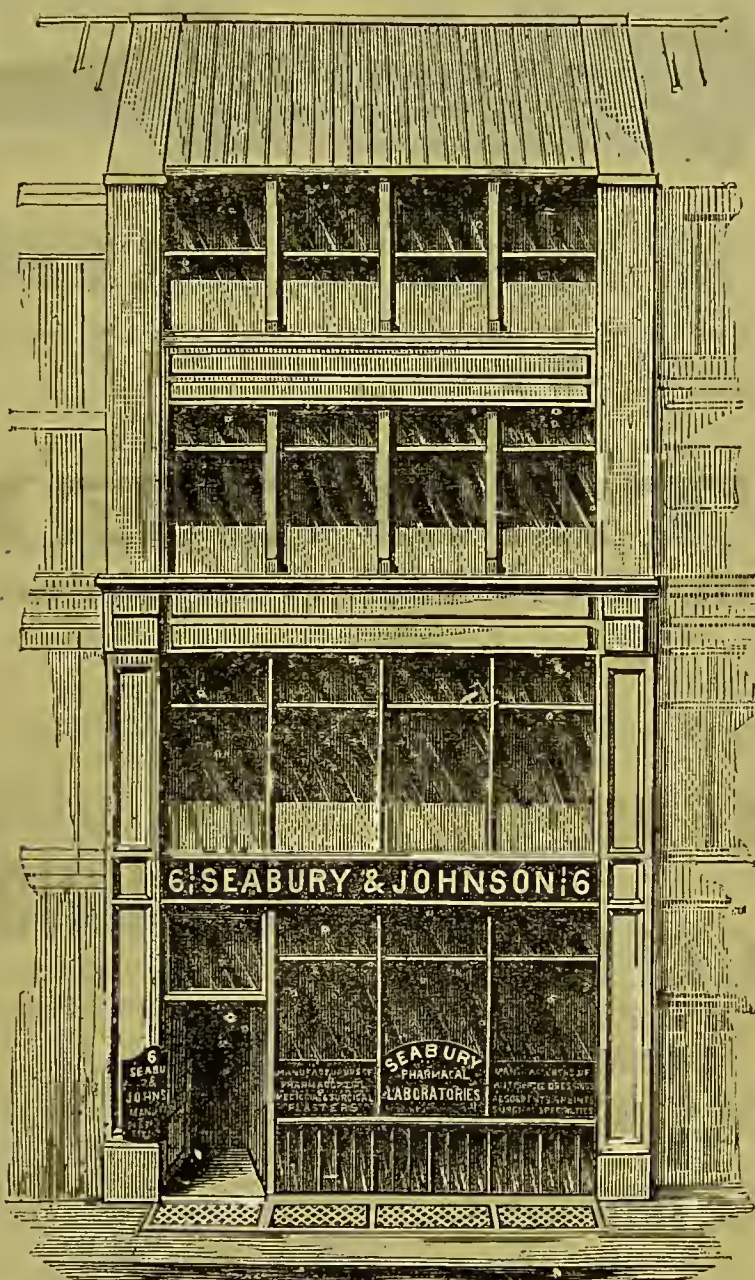
Surgical Dressing Paper,

and every variety of

Surgical and Antiseptic
Dressings.

Catalogue and Price List for
1889 on application.

**AHL'S ADAPTABLE
POROUS FELT SPLINTS.**

**SEABURY & JOHNSON**

MANUFACTURERS OF

HYDRONAPHTHOL

(REGISTERED).

Fully endorsed by eminent
practitioners who have em-
ployed it both in Medicine and
Surgery, and leading Bacterio-
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prove it to be an

Odorless, Non-Poisonous,
and

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For full description see THE CHEMIST AND DRUGGIST, No. 453, Vol. xxxiii, December 22, 1888.

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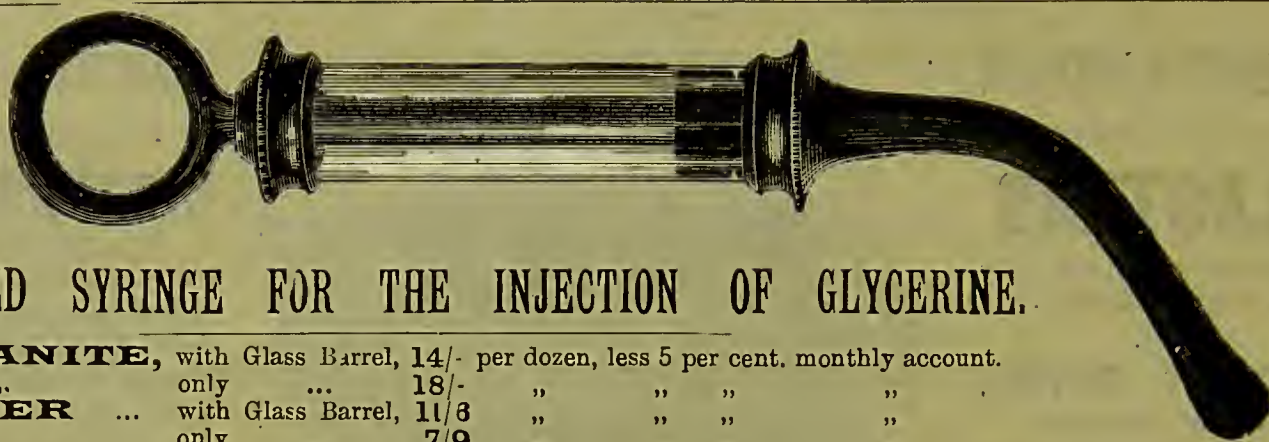
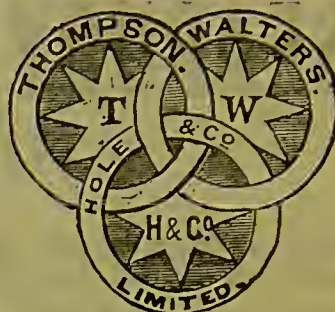
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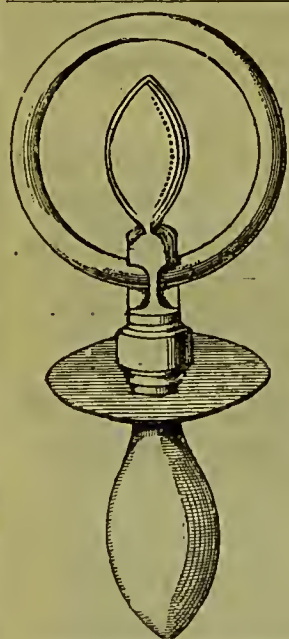
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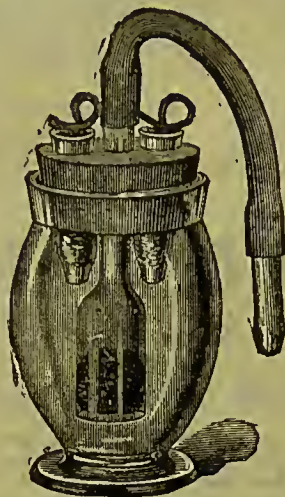
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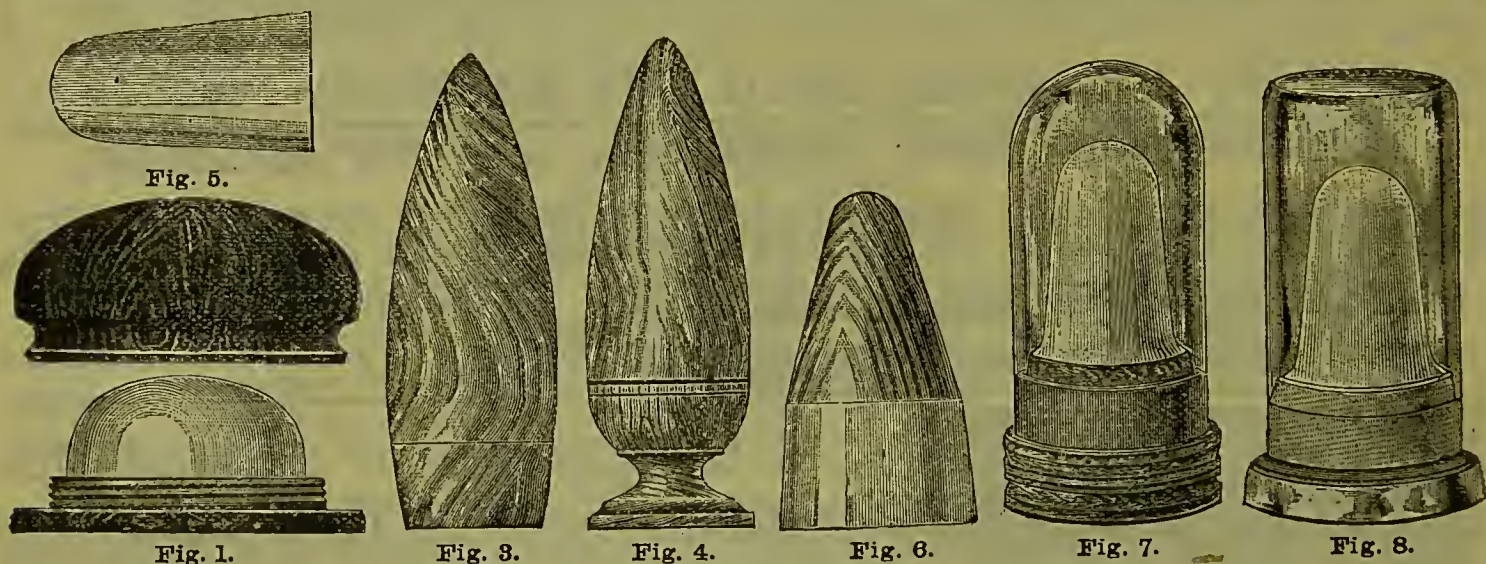


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Fig. 5.	In White Opaque Glass Jars with Red Celluloid Caps	„	2/3 and 3/
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Fig. 6.	Mounted on Vegetable Ivory, in Glass Bottles, Screw Metal Caps	„	4/3
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	On new Glass Mounts, Glass Covers	Per doz.	3/3, 3/9, 4/6, and 7/6	
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Fig. 8.	On Glass Mounts with Glass Covers	„	4/- and 5/6	

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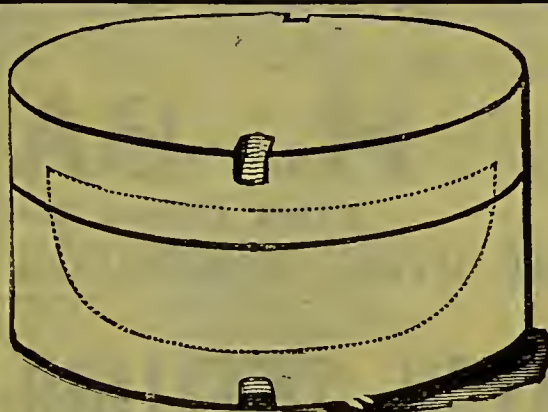
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*Are claimed to be the most perfect
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1 dr.	2 dr.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{2}$	$\frac{2}{10}$	$\frac{3}{4}$	$\frac{4}{6}$	$\frac{5}{6}$ per doz.

THIN for DISPENSING—

$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.
$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{-}$	$\frac{2}{4}$	$\frac{3}{-}$	$\frac{3}{8}$	$\frac{5}{-}$	$\frac{6}{-}$ per doz.

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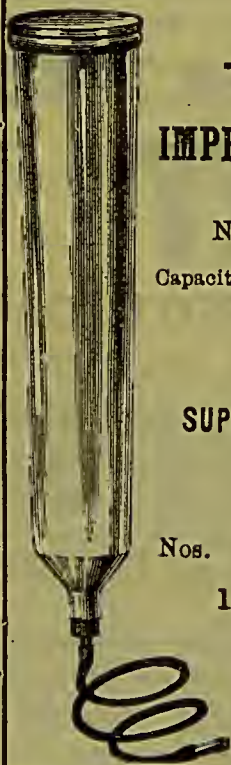
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The cheapest and most efficient machine yet introduced, combining simplicity with portability, and enabling small quantities of pills to be coated with the same facility as large.

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METAL SCREW-CAPPED LIMES, in White Flint, Actinic Green, or Amber. The Best Bottle for Glycerine or Pills. Prices : 1 oz. 13/6, 2 oz. 15/-, 3 oz. 18/-, &c. per gross.

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WATCH SMELLING-SALT BOTTLES

EXCEL ALL OTHERS IN THE MARKET.

The Caps are all fitted with INDESTRUCTIBLE WASHERS, to resist the action of Ammonia and retain the strength of the Salts.

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Fitted with STRONG METAL CAPS, CORK-LINED; in various colours, very attractive in appearance :—1 oz. 12/; 1½ oz. 13/; 2 oz. 13/6; 3 oz. 16/; 4 oz. 18/ per gross.

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R. H. BARRETT,

FLINT GLASS BOTTLE WORKS,

THE OVAL, CAMBRIDGE HEATH, LONDON, E.

Telegraphic Address—"FOREFRONT LONDON."



MELBOURNE, 1880.



SYDNEY, 1879.



PHILADELPHIA, 1876.



PARIS, 1875.



PARIS, 1878.

KILNER BROTHERS, GLASS BOTTLE MANUFACTURERS.

EXCELLENT
QUALITY.
EXTENSIVE
VARIETY.



Dispensing.

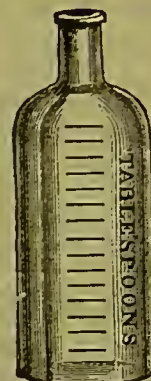
PRICES LOW.



LONDON, 1862.

TELEGRAPHIC ADDRESS—
"BOTTLES
LONDON."

TELEPHONE MESSAGES, No. 7509.



Dispensing.

QUOTATIONS
AND
SAMPLES SENT
ON
APPLICATION.

FEEDING, PICKLE,
DRUG, OIL,
SAUCE, VINEGAR
BOTTLES.



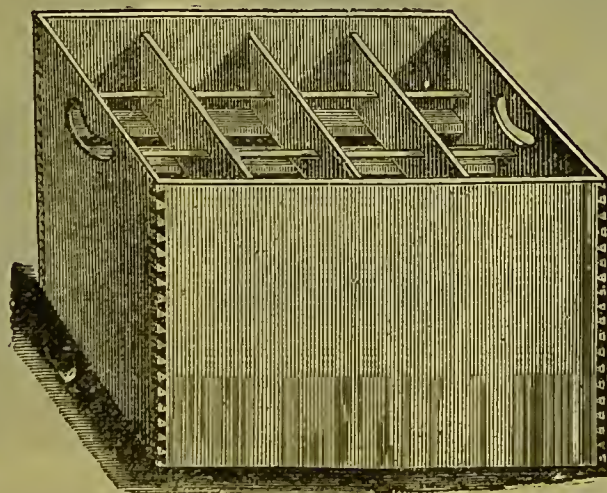
Feeding.

WINE, SPIRIT,
BEER,
CONFECTIONERY
BOTTLES.



Mineral Water
BOTTLES.

VAN



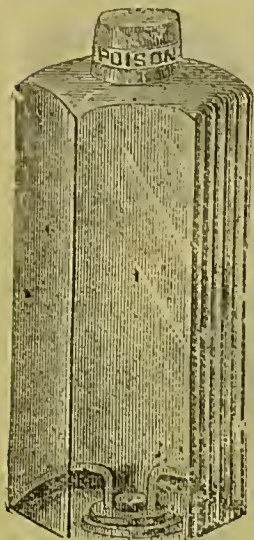
BOXES, CASES,

&c.



Mineral Water
BOTTLES.

➡ No. 3^A GREAT NORTHERN GOODS STATION, KING'S CROSS, LONDON. ➡



NEW POISON BOTTLE

HERMES' PATENT.
REDUCTION IN PRICES.

THIS Bottle supplies a want which has long been experienced by the Trade for a reliable and inexpensive Poison Bottle. The mouth of Hermes' Patent Poison Bottle is at the bottom of the bottle, and before its contents can be poured out the bottle must be reversed; this action being so entirely novel compels the most thoughtless person to reflect as to its contents.

PRICES, PER GROSS, fitted with Boxwood-topped Corks, complete:—

3-oz., 18/6 ... 4-oz., 20/- ... 6-oz., 22/- ... 8-oz., 25/-

The Patentee has appointed as his Sole Manufacturers,

E. A. HEARN & CO., GLASS BOTTLE MANUFACTURERS,
381-3 KINGSLAND ROAD, LONDON, E.

DISPENSING BOTTLES & PHIALS

The following are our greatly Reduced Prices:—

CLEAR BLUE TINTED.

3 and 4 oz. 8/6 per gross. | 12 oz. 11/6 per gross
6 and 8 oz. 7/6 " | 16 oz. 15/6 "

WHITE MOULDED PHIALS.
LONG OR SQUAT SERIES.

1/2 oz. 3/0 per gross. | 1 1/2 oz. 4/3 per gross
1 oz. 3/6 " | 2 oz. 4/9 "

Prompt attention to country orders. Packages 1/ each, allowed for if returned. Sample bottle sent free on application.

I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS,

25 Francis St., Tottenham Court Road, London, W.C.

Established upwards of 70 years.

Bankers, London and Westminster.



Established over 25 Years.

Buyers are respectfully solicited to compare with other Manufacturers.

**GASOGENES, SYPHONS,
FEEDING BOTTLES,
AND ALL KINDS OF
BOTTLES**

CHEAPER THAN EVER.

Price for Black-fitted Feeding Bottles for quantity, 37s. per gross, packed in one dozen cardboard boxes.

Prices can be had on application. Special quotations will be given for quantities.

Seltzogenes, 3-pint Nickel Plated, 7/6 each.
" 5 " " 11/6 "
" 8 " " 15/6 "
Syphons, 18/6, 19/6, 21/ per doz.; if Nickel Plated, 3/ per doz. extra.

Telegraphic Address,
"ASSORTED LONDON."

JULES LANG & CO.

16 Hatton Garden, London, E.C.
25 Rue Notre Dame de Nazareth, Paris.



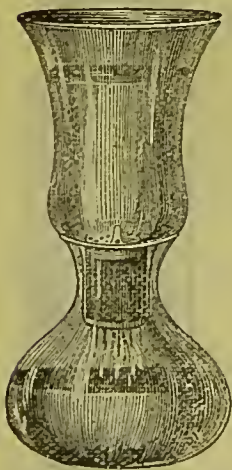
MAWSON'S FILTERS.

(IMPROVED PATENT.)

SPECIALLY SUITED TO WARM COUNTRIES.

THE ONLY FILTERS PERFECTED BY THE AID OF EXACT ANALYSIS.

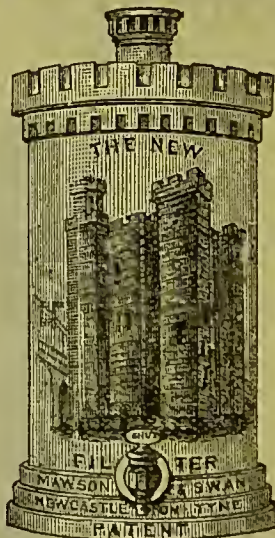
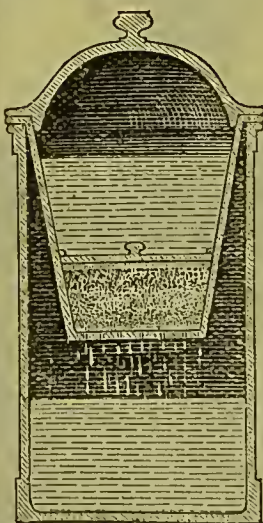
EARTHENWARE.



Pain Glass .. 4/6
Do., with handle 5/6
(including recharges)



Size— 1 2 3 4 6 gallon.
Price— 14/6, 21/, 27/, 35/, 50/ each.



White, decorated 1 2 4
Earthenware.. 35/ 45/ 65/



Engraved Glass .. 6/6
Do., with handle .. 7/6
(including recharges)

THE ABOVE ARE RETAIL PRICES.

SIMPLE, SAFE, EFFICIENT, EASILY & ECONOMICALLY RENEWED.

Proprietors—**MAWSON, SWAN & WEDDELL, NEWCASTLE-ON-TYNE.**

SOLE AGENTS FOR CANADA—

EVANS & SONS (Limited), MONTREAL and TORONTO.

SHOP FITTINGS.

THE undersigned beg to call the attention of the Trade to this department of their business. They are in a position to tender for same to suit every description of shop, or any measurements, and can guarantee them to be of the very best workmanship.

SHOW CASES, &c., of every description, for full particulars of which see Prices Current.

Shop Rounds, Labelling, &c., estimated for and undertaken at customers' own shops if desired.

The following gentlemen, having recently had their shops refitted throughout, can be referred to as to quality of work :

Mr. VERDON, Stockport.
 , HAMNETT, Manchester.
 „ MORRIS, Portmadoc.
 „ STEPHENSON, Liverpool.
 „ T. A. STEAD, Freshfield.
 „ A. ALLAN, Inverness.

Messrs. PEARSE & CO., Limerick.
 Mr. JACKSON, Blackpool.
 „ WITHERS, Blackpool.
 „ McIVER, Dingwall.
 „ G. D. YATES, Birkenhead.
 „ P. H. A. HUGHES, Liverpool.

P.S.—Can quote Show Cases, &c., specially manufactured for Export to Hot Climates, &c.

LIVERPOOL:
EVANS, SONS & CO.

LONDON:
EVANS, LESCHER & WEBB.

WE CAN MANUFACTURE SPECIALLY FOR HOT CLIMATES.

WE CAN MANUFACTURE SPECIALLY FOR HOT CLIMATES.

IMPORTANT

TO WHOLESALE AND RETAIL DRUGGISTS, DRUGGISTS' SUNDRIESMEN, ETC.

NIBLETT'S SPECIALITIES

IN

PILL MAKING MACHINERY.

Inventor, Patentee, and Manufacturer of the Pill Rounding and Finishing Machine and the "Oscillator" Pill Coater, suitable for Pearl or Sugar Coating.

HAND PILL MACHINES, FOR COUNTER USE.

Rotary Pill Cutters, Piping Presses, Gelatine Pill Coating Machines, for large or small quantities, Pill Counting Apparatus, &c., &c.

The following are the Names of a few of the many eminent Wholesale Firms, English and Foreign, that are successfully using my Machines, i.e.:—

Mr. Thos. Beecham, St. Helens; Messrs. Evans, Sons & Co., Bell, Sons & Co., Liverpool; Barron, Harveys & Co., Allen & Hanburys, Hearon, Squire & Francis, The General Apothecaries Co., Mackey, Mackey & Co., Corbyn & Co., Hodgkinson, Treacher & Clarke, H. & T. Kirby & Co., Dinneford & Co., Mr. W. Martindale, &c., London; Southall Bros. & Barclay, Alfred Bird & Sons, Morris Banks & Co., Birmingham; Wyleys & Co., Coventry; Brady & Martin, Newcastle-on-Tyne; Reynolds & Branson, Leeds; Duncan, Flockhart & Co., Edinburgh; Kay Bros., Stockport; Jas. Woolley, Sons & Co., Manchester; The Glasgow Apothecaries Co., &c., &c.

PRICE LIST WILL BE MAILED FREE ON APPLICATION TO

G. W. NIBLETT, ENGINEER AND PATENTEE,
26 Rainbow Street, Southampton Street, Camberwell, London, S.E.

Calcutta International Exhibition, 1883-4.

GOLD



MEDAL.

Highest and only Award ever obtained for Mixing Machines adapted for Powders.

THE BRACHER-PATENT PASTE AND LIQUID MIXER.

The Machine saves much time, labour, and trouble. It is strong, easy to work, and can be taken apart to empty and clean in a few seconds, and, as it is firmly fixed to the Stand without screws, is not liable to get out of order.

That the BRACHER-PATENT is a First-class Machine for Mixing Paste and Liquid Blacking, Harness Paste, and all kinds of Soft or Wet Material, the following TESTIMONIAL will prove:—

From CHARLES HAMLIN, Manufacturer of the ELECTRIC HARNESS COMPOSITION, &c.

36 High Street, Salisbury, July 21st, 1888

Gentlemen,—Your Paste Mixer answers my purpose very well indeed; it is a great boon, and I shall have great pleasure in answering any questions respecting it.

Yours truly,

Messrs. Bracher & Co., Wineanton.

CHAS. HAMLIN.

BRACHER & CO.

INVENTORS, PATENTEES, & MANUFACTURERS,
WEST HILL, WINCANTON.

SHOWROOMS—

London: 100 Houndsditch. Manchester: 24 Corporation St.

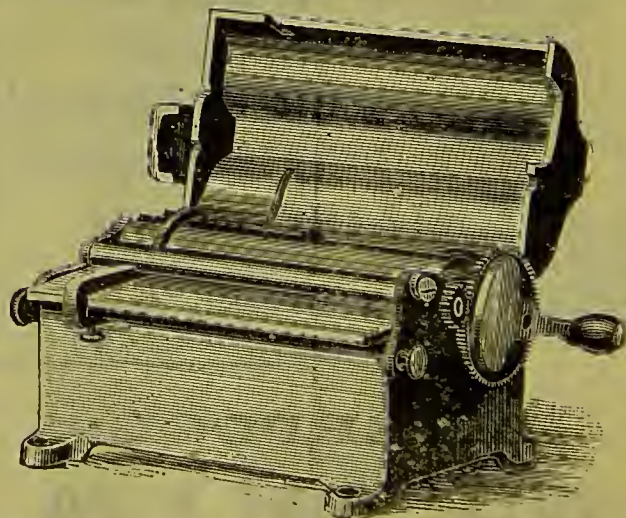
JOHN HOLROYD & CO., LIM.

Engineers, Tool Makers, and Machinists,
TOMLINSON ST. WORKS, HULME,
MANCHESTER.

MACHINES FOR MAKING COMPRESSED TABLETS.

MACHINES FOR GUMMING

Either an entire surface or the edge only of Labels,
Wrappers, &c.



Machines Built to Contract for Inventors and
Merchants.

ROTARY PILL
MACHINES

Fig. A.

Fig. A.—This invention consists in a novel and improved arrangement of Machinery, whereby any description of Pill Mass can be converted into Pills, at the rate of from 15 lbs. to 40 lbs. per hour, according to the size of the Machine used.

Fig. A.—No. 1 .. £12 12s.
No. 2 .. £15 15s.
No. 3 .. £20 0s.

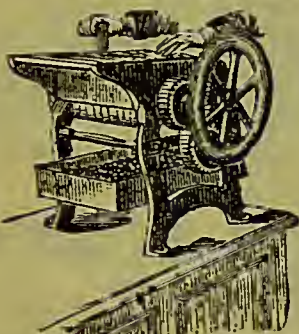


Fig. B.

Fig. B.—A small useful Machine, capable of making 10 lbs. of Pills per hour, particularly adapted for persons making small quantities, at £7 15s.

Press suitable for same, £2 15s.

Any of the above can be made to cut two or three different size Pills, at an additional cost for extra Rollers and Plates.

PIPING PRESSES

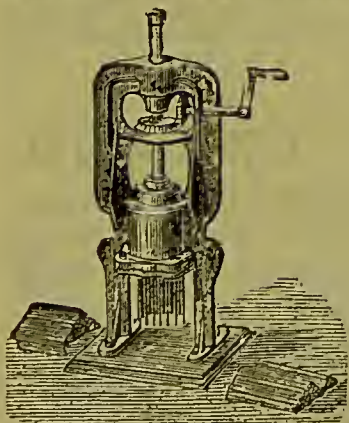


Fig. C.

Fig. C. is the improved Press for Piping, by means of which a great quantity of Mass can be Piped in a few minutes, truer than by the old method of rolling.

No. 1 £ 0s.
Fig. C.—No. 2 .. £5 10s.
No. 3 .. £8 0s.

J. W. PINDAR'S NEW ROTARY PILL MACHINES

As used to this date by Messrs. Holloway, Cockle, Cox, and all the principal Pill Makers in Europe, Asia, Africa, America, and Australia.

J. W. PINDAR'S
New Rotary
HORSE BALL
MACHINES.

These Machines are on a similar principle to the Rotary Pill Machines that have given such great satisfaction in all parts of the world.

Price £8 15s.

Rollers for other sizes, Riggers for Steam Power, also Gas Apparatus if required, supplied at a small additional cost.

Mr. J. W. PINDAR, 224 Strand, 13th March, 1866.

Sir,—I have much pleasure in stating that the Pill Machine which you made for me answers remarkably well, as the Pills are far better made than those by hand-machines, and with much less waste. I can, therefore, confidently recommend it as a very excellent one, a great saving of labour and, consequently, expense.—I remain, yours faithfully,

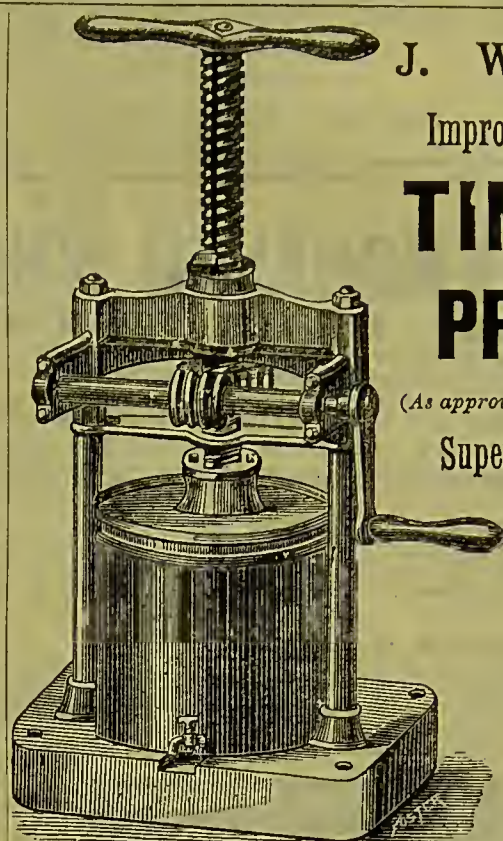
THOMAS HOLLOWAY.

3 Crane Court, Fleet Street, Feb. 14th, 1871.

To Mr. J. W. PINDAR.

Dear Sir,—We have now used your Rotary Pill Machine about six years, and find it answers better than any we had previously used, and makes the Pills of a very regular size.—Yours truly,

T. WHELPTON.

J. W. PINDAR'S
Improved Double-Action
TINCTURE
PRESSES

(As approved of by Wholesale Chemists)

Superior to Hydraulic,

On account of holding the pressure.

Prices for One Gallon
£3 10s.

For each additional
Gallon, £1 10s. extra.

Directions for use
forwarded with each
article.

338 Oxford St., opposite Great Portland St.

Mr. J. W. PINDAR, Feb. 11th, 1871.

Sir,—The Rotary Pill Machine and Press which we had from you (for a special order) answered very satisfactorily.—We are, Sir, yours respectfully,

JOHN BELL & CO.

29 Murray St., New York, and Farringdon Rd.,

Mr. J. W. PINDAR, London, Nov. 9th, 1880.

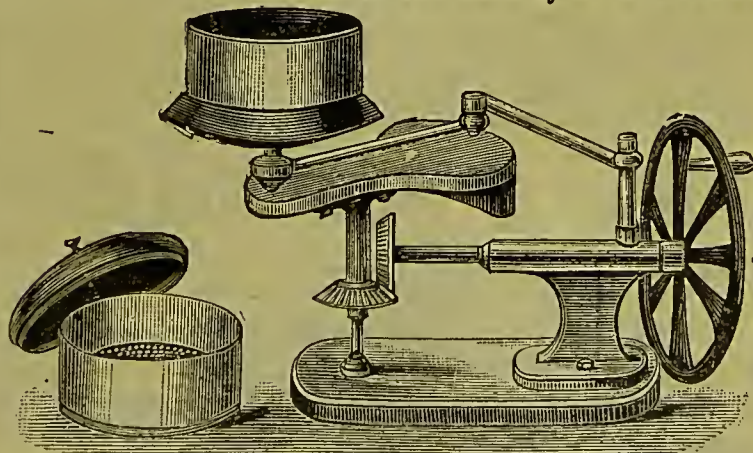
Dear Sir,—Your letter of inquiry came duly to hand. As I always told you, the Pill Machine in operation at my London warehouse has given entire satisfaction. So have those we are using in this country. We can make smooth, round Pills of uniform size at a very small expense. I can safely say that your Pill Machine is all that you claim it to be—a perfect Machine.

Yours truly,

A. J. WHITE.

NEW PATENT
"ECCENTRIC" PILL COATER.

Invented and made by J. W. PINDAR, Patentee.



PRICES.

No. 1.—For 2 lbs., £3 5s.; sifter for same, 7s. 6d.

No. 2.—For 5 lbs., £4 15s.; sifter for same, 15s.

No. 3.—For 10 lbs., £6 15s.; sifter for same, £1 5s.

No. 4.—For 20 lbs., on Iron Standards for Steam, Gas, or other power, £15 15s.; sifter for same, £2 5s.

The smallest Machines can be worked by Steam Power at a small additional cost.

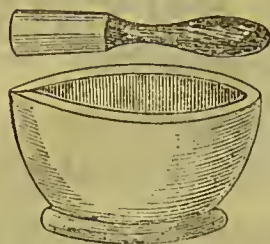
By an entirely new arrangement of mechanism this machine is constructed in a manner which supercedes all others, as, owing to its "Eccentric" motion, the Pills, which may be coated with Pearl, Silver, Gold, or Sugar, &c., &c.—are thoroughly separated from each other during the process, and retain their original spherical form, whilst being thrown round the receptacle with remarkable velocity.

These machines are equally adapted for coating large or small quantities; thus, a machine constructed for and suitable for coating 20 lbs. will coat 1 lb. only with equal efficacy, and in the most satisfactory manner.

Each machine is supplied with a Drug or Powder Sifter, to be attached if required, and which, fitting to top of Pill Receptacle, is subject to the same "Eccentric" motion as above mentioned.

This addition will be found of great advantage in the laboratory, being both efficient and compact.

Testimonials from all parts of the World may be seen on application to
J. W. PINDAR, 75 New Church Rd., Camberwell, LONDON.



WEDGWOOD ACID-PROOF MORTARS AND PESTLES.

ALSO MANUFACTURERS OF

Funnels, Evaporating Pans, Electric Battery Fittings, Bed Pans, Urinals, Medicine Spoons, Physic Cups, Sick Feeders, Bleeding Basins, Medicine Measures, Eye Cups, Inhalers, Nursery Lamps, Wall Tiles, &c.

PRICE LIST ON APPLICATION. SPECIAL QUOTATIONS FOR LARGE ORDERS.

Any Article not bearing the Stamped Trade Mark "WEDGWOOD" is not made by us.

JOSIAH WEDGWOOD & SONS, ETRURIA, STOKE-ON-TRENT.
London Rooms: 8T. ANDREW'S BUILDINGS, HOLBORN CIRCUS.

PRIZE MEDAL,
International
Health Exhibition,
1884.

THE NEW PERMANENT

ENGRAVED WINDOW TABLETS

AWARD OF MERIT,
International
Sanitary Exhibition,
1881.

IN RUBY, BLUE, AMBER, AND OPAL GLASS.

Send particulars of size, subject matter, and colour, when price for one Tablet and upwards will be sent.

For Proprietary Articles, 100 8x6 Ruby Tablets, £3 15s. 0d.

J. R. CORSAN, THE LONDON SAND-BLAST WORKS, 80 GRAY'S INN ROAD, W.C.
TO PREVENT FRAUD, DEMAND BUSINESS CARD FROM TRAVELLERS.

PATENT RESERVOIR TOOTH BRUSH

LASTS A LIFETIME

GOAD & CO 42 MOORFIELDS LONDON E.C.

The Reservoir attached to the Brush is simply and quickly filled with water or any other liquid. Additional Brushes if required.
Plain White, 13/6 per dozen; Coloured Enamelled Reservoir, superior Brush, 17/ per dozen, in fancy boxes.



BABY'S & INVALID'S SPOON.

PATENTED & REGD

Silver Plated—Tea size, 3/9; Dessert, 7/6; Table, 11/ per dozen, on cards.

GOAD & COMPANY 42 Moorfields, Moorgate St., London.

EUCALYPTUS OIL, EUCALYPTOL, RED GUM, &c.

MEDICAL, TOILET, & SANITARY SPECIALITIES

Prepared from the Eucalyptus Oil, which is one of the strongest
Antiseptics known.

DR. DAY'S SPECIALITIES.

EUCALYPTOL CREAM, LINIMENT, DENTIFRICE,
TOOTH POWDER, HAIR WASH, &c.

Also Dr. Day's TONIC APERIENT PILLS.

PRICES, &c. ON APPLICATION.

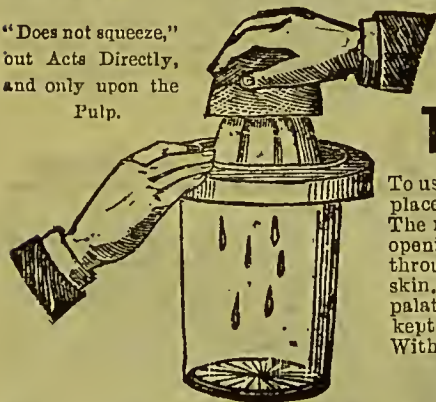
J. TUCKER & CO.

Wholesale Drug and Medicine Agents,

51 PADDINGTON ST., LONDON, W.

THE WORLD'S BEST LEMON SQUEEZER AT 1/-

"Does not squeeze,"
but Acts Directly,
and only upon the
Pulp.



*This Lemon Squeezer is to the old-fashioned article what the
Railway Carriage is to the Stage Coach.*

THE "MODERN" LEMON SQUEEZER.

To use it, set the squeezer upon a tumbler, as shown by the accompanying illustration, place a half lemon upon the points, press downward, and rotate the lemon slightly. The ribs easily enter the pulp, the juice as it is liberated passes down through the openings into the tumbler; these openings are too small to allow the seeds to pass through. By this process the clear juice from the PULP is obtained free from admixture with the bitter oil of the skin. The juice thus procured is doubtless a most wholesome beverage, and is certainly very agreeable to the palate. Once tried this squeezer will supplant all old-fashioned appliances. Being made of glass, it is as easily kept clean as a tumbler. This squeezer can be used by a child, without soiling the hands, it is so easily managed. With this new appliance none of the juice is lost, therefore its superiority to old types of squeezers will be obvious.



WHOLESALE PRICE ON APPLICATION TO

B. & E. M'HUGH & CO., BELFAST, IRELAND.

Patents taken out for India, Canada, Victoria, Australia, Queensland, New Zealand, Cape Good Hope; also Austria, Belgium, France, Germany, Italy, Norway & Spain.

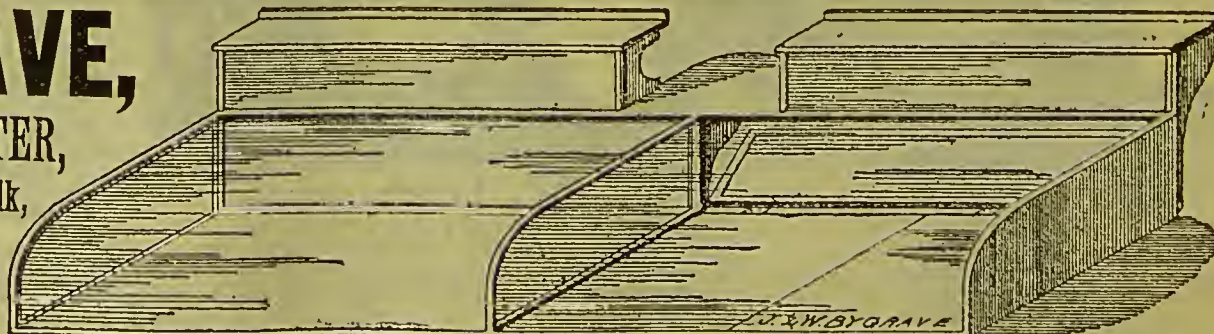
BYGRAVE,

SHOP FITTER,

111 Shepherdess Walk,

CITY ROAD,

LONDON, N.



Bent-top plate-glass Counter Showcase, in French polished mahogany, or ebonized, with two upright mirror plate-glass fronted shelves, and table in centre for serving over, and mahogany falls at back lined with mirror plate glass, inside fitted with crimson velvet trays—if 5 ft. long, 18 in. wide, 8 in. high (total height 13 in.), £5 10s.; 5 per cent. off for cash

J. MATHYS & CO.

(Over 30 Years with Messrs. G. TREBLE & SON),

SHOP FITTERS

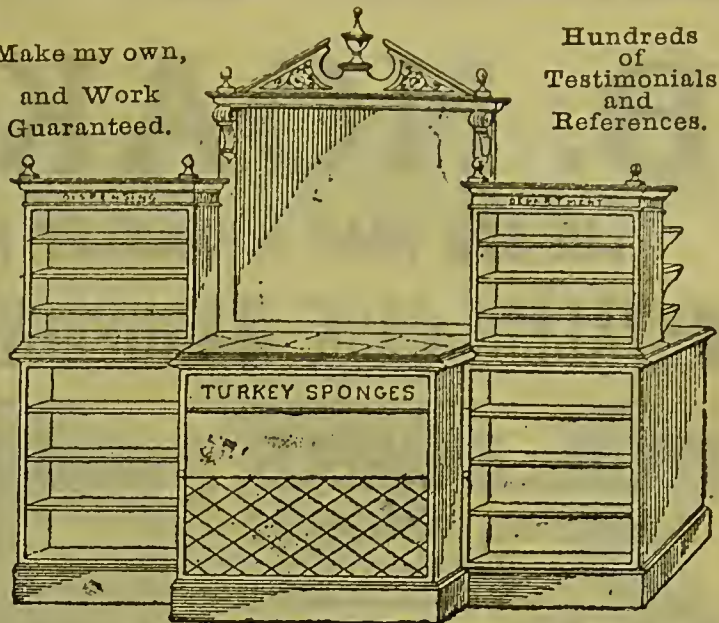
AND

SHOW CASE MAKERS.*Estimates and Designs Submitted.***5 ORCHARD BUILDINGS, ACTON ST.
KINGSLAND, N.****HUNT'S
BOTTLE
CAPS**Pleated Paper, from 8d.
per Gross.

LONDON:

25 Great Windmill St., W.

Depot of DIGNE'S ENAZYMES.

Make my own,
and Work
Guaranteed.Hundreds
of
Testimonials
and
References.

The above represents a Plate-glass and Mahogany Dispensing Screen and Counter. The cases on each side of the marble slab over sponge case have silvered glass backs, and are fitted with movable shelves; the cases in front of counter are also fitted with movable shelves. The mahogany used is beautifully figured. At back under counter fitted with Drawers for Corks, Labels, Paper, &c., &c., and the back of screen with three shelves the entire length for Bottles.

6 ft. long, complete, £18; if Screen only, without Counter, £8 10s.

ELKANAH NATALI

(Established 20 Years),

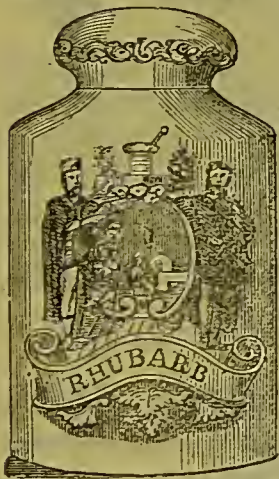
SHOW CASE MAKER AND SHOP FITTER,

207 OLD STREET (Shoreditch End), LONDON;

Workshops—HENSON STREET, E.C.

(ONLY ADDRESSES).

No connection with any other house of the same name.
PLEASE ADDRESS IN FULL.

[Estab.] **TO CHEMISTS AND DRUGGISTS.** [1828.]
ALBERT J. HARRIS,
MEDICAL LABELLER AND ORNAMENTAL WRITER
 ON GLASS IN BURNISHED GOLD,
120 FARRINGDON ROAD, W.C.
North End. Five minutes' walk from Farringdon Street Station.

Show Jars labelled inside to any design cheaper and equal to any other house in London. Glass Facias, Show Tablets and Glass Labels for Drawers, 7s. to 10s. per dozen, with cement instructions for fixing. Gold Paper Labels forwarded to any part of the country on receipt of list at 3s. per dozen, all sizes. Orders by post or otherwise punctually attended to, and Shops labelled in any part of the country at 3s. 6d. per dozen on payment of third-class fare and lodgings. Show Jars relabelled equal to new.

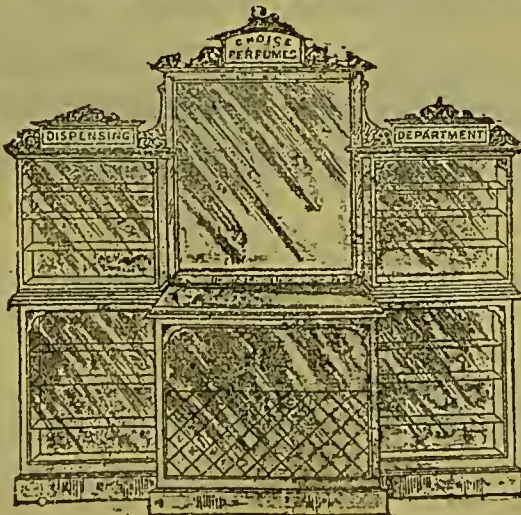
A considerable discount allowed to Foreign and Wholesale Houses.**"THE CHEMIST" DISPENSING COUNTER.**

6 feet long by 2 feet wide .. £24
If the Dispensing Screen only, £12

This handsome Dispensing Counter is manufactured in Spanish mahogany, and of the best workmanship, so that it will stand any climate. The counter has a solid mahogany top, and plate-glass case front. The centre part fitted to take sponge. A mahogany screen on top, consisting of two plate-glass cases, with shelves inside, and large plate-glass mirror in the centre, and three glass tablets with gold writing in ornamental mahogany carved work. The back of screen fitted with small shelves and a glass poison cupboard. The inside of counter fitted with strong counter drawers, label and cork drawer, open shelves, &c.

BOWLING & GOVIER

Manufacturers of High-class Shop Fittings,
GUN ST., BRUSHFIELD ST.
BISHOPSGATE, E.C.

**NOTICE TO THE TRADE.**

In consequence of inferior Second-hand Goods being sold for our make, we have found it necessary to protect our reputation for best work with a Trade Mark, as above, and unless goods are so stamped we cannot be answerable.

B. NOAKES & CO.

142 SPA ROAD & DOCKLEY ROAD, BERMONDSEY, LONDON, S.E.

METALLIC CASK MANUFACTURERS & TIN-PLATE WORKERS.

STEEL BARRELS,

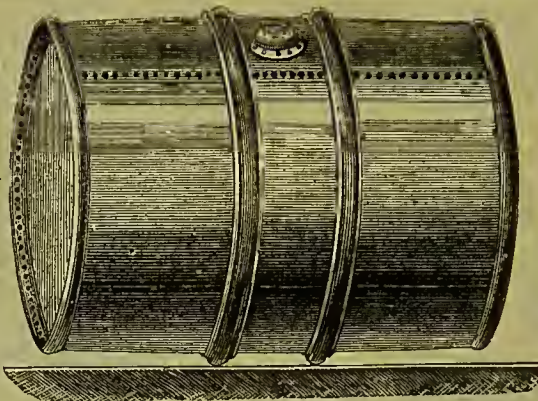
Capacity 40 to 120 Gallons,

AS PER ILLUSTRATION.

IRON KEGS, IRON DRUMS,

SUITABLE FOR

All kinds of Chemicals, Varnishes,
Paint, Spirit, &c.



These large Steel Casks, similar to sketch, can be handled with equal facility to wooden barrels, and, owing to their strength and durability, can be used over and over again for an indefinite period. They are perfectly liquid tight, being tested at a very high air pressure, and, unlike wood, do not absorb any of the contents. They are all fitted with interchangeable screw bungs, and can also be fitted with screw plug in head, for draw-off tap.

They are specially adapted for all kinds of Chemical Products, Sulphuric Acid, Glycerine, Spirits, Oils, Turpentine, Petroleum, Benzoline, Varnishes, Tar, Naphtha, Mineral Extracts, and Indammable Liquids of every description.

We are making them in three qualities, "Black Steel," "Lead Coated," and "Tinned."

Telegraphic Address—"NOAKES LONDON."

PRICE LIST ON APPLICATION.

NOAKES' PATENT LEVER TINS.

AIR-TIGHT TIN.
NOAKES' PATENT.



Eminently suitable for packing
MIXED
PAINTS,
SYRUPS,
FRUITS,
CREAM,
HONEY,
JAMS, &c.



Patent Rings, Lids, and Bottoms, supplied loose for Export,
or for Firms making their own Tins.

Levering open with a Coin.
NOAKES' PATENT.



Eminently suitable for packing
CONFEC-
TIONERY,
DRUGS, TEA,
POWDERS,
&c.

Closes without Solder.

"A Tin which can safely be recommended to the attention of packers."—*The Grocer*, 30th July, 1887.

Opens without a Knife.
"The invention is one of the most important of the day."—*The Store-keeper*, 27th January, 1888.

THE NEATEST TIN.

THE MOST AIR-TIGHT TIN.

NO SHARP EDGES.

NO CUT FINGERS.

"Possesses important advantages over others of a somewhat similar kind."—*British Trade Journal*, 1st July, 1887.

NO SOLDER USED.

NO KNIFE REQUIRED.

EASILY OPENED.

EASILY CLOSED.

EVERY OTHER DESCRIPTION OF BOX FOR CHEMISTS

Such as Decorated Tin Lozenge & Tooth Powder Boxes, Round, Square, or Oblong, &c.

In the High Court of Justice, Chancery Division.

GRIFFIN v. NOAKES, 1887. G. No. 1188.

PATENT SELF-FIXING LEVER TINS.—This action has now been decided in our favour.

WRITE FOR PRICE LIST No. 6.

B. NOAKES & CO., BERMONDSEY, LONDON, S.E.

ROBINSON & SONS,

MANUFACTURERS OF
ROUND AND SQUARE CARDBOARD

BOXES

FOR THE

DRUG, DRYSALTERY & CONFECTIONERY TRADES,

LABELS WHEN PRINTED TO OUR INSTRUCTIONS WE PUT ON PILL AND OTHER BOXES FREE OF CHARGE

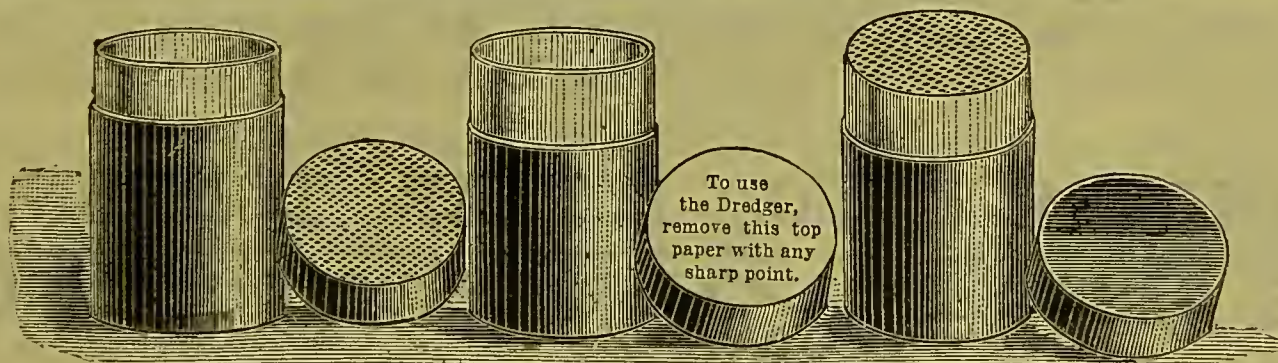
ESTABLISHED 1839.

BOXES AND CASES FOR

Baking Powder, Black Lead, Bottles, Camphor Ball, Capsules, Castor Oil, Cough Lozenges, Dispensing Powder, Eye Ointment, Fancy Boxes, Fuller's Earth, Folding Boxes, Glass Top Outers, Homœopathic Bottles, Insect Powders, Ink Cases, Jewellery, Lozenge, Lip Salve, Magnesia, Metal Paste, Marking Ink, Nipple Shields, Night Lights, Parcel Post, Pastilles, Pills, Potash, Tablets, Plasters, Salt Lemon, Seidlitz Powder, Starch Gloss, Soaps, Soda Powder, Syringes, Tapers, Tooth Powder, Violet Powder, &c.

INSECT POWDER BOXES.

COVERED IN ANY STYLE TO SUIT PURCHASERS.



A PERFORATED ZINC ON TOP OF LID.

B " " but covered with a printed card, which can be removed to dredge the Powder.

C " " INSIDE THE BOX, the shoulder being left loose for filling.

WHEATBRIDGE MILLS & HOLMBROOK WORKS, CHESTERFIELD,
AND
55 FANN STREET, ALDERSGATE STREET, LONDON.

BEESWAX.

W. H. B. WHITE { put up in 2-lb. parcels in cases of 54 lbs.

W. H. B. REFINED { in 2-lb. cakes in cases 130 lbs. 1-lb., ½-lb., and oz. cakes.

The purity of these goods is certified by the following eminent chemists: S. P. Sharpless, State Assayer, Boston; J. W. Taylor, Associate of the Society of Public Analysts of Eng., Montreal, P. Q.; Edward Davies, F.O.S. and T. I. C. and C. Royal Institution. LIVERPOOL, Eng.; Bernard Dyer, D.Sc., F.O.S., F.I.C., Member of the Society of Public Analysts, 17 Great Tower Street, LONDON, E.C., Eng.; Wm. T. Wenzel, Analyst and Assayer, San Francisco, Cal., and may be obtained of any of the leading Wholesale Druggists in the Northern and Midland Counties.

CRUDE BEESWAX,
Foreign and Domestic.

CERESINE,
Yellow and White.

PARAFFINE WAX,
Refined, all Grades.

We will deliver our goods in 5-cwt. lots ex quay, in any city which is the Terminus of a Steamship Line throughout the Kingdom, without trouble or expense to the Buyer.

CABLE ADDRESS—"BOWDLEAR BOSTO

OZOKERITE,
In Bales.

CARNAUBA,
or BRAZIL WAX.

JAPAN WAX
in Cases.

W. H. BOWDLEAR & CO., BOSTON, MASS., U.S.A.
Office and Warehouse—36 CENTRAL WHARF.



AUSTIN & CO.
PATENTEES & MANUFACTURERS OF
Round Cardboard AND OTHER SHAPED Boxes,

*For POSTAL and general purposes;
Also PATENT BARREL PACKAGES with Metal ends, for dry goods; POSTAL TUBES,
etc., etc.; Inventors of the "NOVEL" METAL PERFUME SPRINKLERS,
WOOD TURNERS' MENTHOL CONE BOXES—Our Speciality.*

OFFICE AND WAREHOUSE:

8 GREVILLE ST., HATTON GARDEN, LONDON, E.C.

Steam Works, 2 Printer's Buildings, Broad Yard, Turnmill Street, London; and Ring Factory, Clonakilty, County Cork.

PETROLEUM JELLY

PARAFFINUM MOLLE B.P. (PIONEER BRAND.)

Equal to and Cheaper than **VASELINE.**

FOR MEDICAL AND PHARMACEUTICAL PURPOSES.

White, Yellow, Veterinary, and Waterproof. All kinds put up in 1-lb., 5-lb., 7-lb., 14-lb., 28-lb., and 56-lb. Patent Tins, and in 300-lb. Barrels.

SEND FOR SAMPLES AND PRICES TO THE MANUFACTURERS—

GRINDLEY & CO., POPLAR, LONDON, E.

PURE, HARMLESS,
VEGETABLE

COLORS

CONFECTIONERS' (IN POWDER)

Send a
Sovereign for a
Sample Assortment
in 4 & 8 oz. Packets.

COPAL VARNISH CO., Ltd.

FINE COLOR MANUFACTURERS,
LONDON, E.C.

COLTHURST & HARDING,



BRISTOL—Manufactories: Phoenix Wharf and Temple Gate. Offices: Temple Gate. Telegrams: "Phoenix Bristol."

LONDON—Manufactories: Alpha Works, Millwall, E. City Office: 16 Fish Street Hill, E.C. Telegrams: "Alpha Brand London."

HARD LUSTROUS ENAMEL,
IN ALL THE ART SHADES.

For all kinds of decoration on Wood or Iron. Dry with a surface like Porcelain. Sold in small or large Tins, or in bulk. Prices and shades on application.

WHITE LEAD, ZINC WHITE,

PAINTS & COLOURS OF ALL KINDS.

MIXED PAINTS READY FOR USE,
In Tins, 1, 2, 4, 7, and 14 lbs. each.

HIGH-CLASS VARNISHES

Of all kinds, for Coachbuilders, Decorators, &c. OIL BOILERS, REFINERS & MERCHANTS. Export Orders receive special and prompt attention.

BALL DENOTES
COLOUR OF PAINT.

BOORD & SON,

RECTIFYING DISTILLERS & WINE MERCHANTS,

ALLHALLOWS LANE
and
BARTHOLOMEW CLOSE, } LONDON, E.C.,

OFFER LOWEST QUOTATIONS, ON APPLICATION, FOR

FINEST RECTIFIED SPIRITS OF WINE,

Methylated Spirit and Finish; Finest Orange Wine, Sherries,
and Malagas for Medicated Wines.

S.V.R.

PURE GRAIN SPIRIT 56 O.P., B.P.... 18/5

Do.

Do. DOUBLE DISTILLED 18/9

Cash with Order. Reductions for Larger Quantities than Two Gallons.

SAMPLES FREE.

STEPHEN SMITH & CO., BOW, LONDON, E.

S.V.R.

SPECIALITY FOR PERFUMERY.

This pure grain spirit, which has been thrice rectified and filtered through charcoal, is being largely used in making high-class Perfumes.

Price, 19/-, 56 o.p.; 19/6, 60 o.p. Cash with order
Reductions for Larger Quantities than Two Gallons.

STEPHEN SMITH & CO., BOW, LONDON, E.

JAMES
BURROUGH, S.V.R.

CALE ST., CHELSEA, S.W.

and Methylated Spirit.

WRITE FOR PRICES.

PURE RECTIFIED SPIRITS OF WINE

(DOUBLE DISTILLED).

56 o.p. 18/9; 60 o.p. 19/3 per gallon. CASH WITH ORDER.

SPECIAL QUOTATIONS FOR QUANTITY, AND FOR EXPORT IN BOND.

METHYLATED SPIRIT.

JAMES LESLIE & CO., DISTILLERS, BELFAST.

PURE SPIRITS OF WINE.

(STEAM STILL)
ONLY.

60 o.p., 18/9 per gall.; 56 o.p., 18/3 per gall.

(SPECIAL QUOTATIONS)
TO LARGE CONSUMER.

CASH WITH ORDER.

GEORGE PHILLIPS & CO., ST. ANDREW'S DISTILLERY,
CLERKENWELL ROAD, LONDON, E.C.

Introduced 1855.

ROBINSON'S CONCENTRATED WATERS.

(Introduced 1855.)

One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical Impurity. They will keep good any length of time in any climate.

Aqua Ansthi, Concent., 4/ lb.	Aqua Cinna. Var. Concent., 6/ lb.	Aqua Foeniculi, Concent., 4/ lb.	Aqua Pimentæ, Concent., 4/ lb.
" Anisi " 4/ "	" Cassia " 4/ "	" Menth. Pip. " 4/ "	" Rosa " 8/6 "
" Camphoræ " 4/ "	" Flor. Aurant. " 8/6 "	" Ang. " 6/ "	" Rosa Virgin. " 10/6 "
" Carui " 4/ "	" Flor. Sambuci " 8/6 "	" Virid. " 4/ "	

The above are put up in Bottles of 1/2 lb. or 1 lb. and upwards, each of which has the Inventor's Protection Label over Cork.

From the LANCET, July 15, 1882:—"CONCENTRATED WATERS (Robinson's, Pendleton, Manchester).—Among the samples sent to us we find Aq. Ansthi, Anisi, Cinna. Var., Rosa, and some dozen of others. Diluted with forty parts of water they form the ordinary waters of the Pharmacopoeia. They are excellent in quality, and will be very useful, especially in country practices.

Wholesale Agents: HEARON & Co., London, and most Provincial Wholesale Druggists. PREPARED BY THE INVENTOR.
B. ROBINSON, MANUFACTURING CHEMIST, DISTILLER, AND BREWER OF BRITISH WINES, MANCHESTER.

GOING LINES.

LITTLE BEAUTIES FEEDERS.

THE BEST FEEDERS MADE.

All fitted with best ENGLISH Black Indiarubber Tube.



- | | |
|--|-------------|
| 1s.—Each in box, with spare tube and brushes,
equal to most 1/6 Feeders | 5,6 doz. |
| 6d.—Green Glass Screw Neck, Loose | 34/- gross. |
| 6d.— " Box Top Corks, Loose | 30/- " |
| 6d.—White Glass " " " " | 33/- " |

The 6*d.* may be had 1 doz. in wood box at 2*s.* gross advance.

TEETHING PADS.

No. 826.

1 dozen on Card, Bone and Indiarubber Teat, 2/6 dozen.

GLYCERINE PURGATIVE SYRINGES.

- | | |
|---|----------|
| No. 821.—All Glass | 3/6 doz. |
| „ 822.—Glass, with Vulcanite Pipe (cheap form) | 7/- „ |
| „ 827.— „ „ Piston Pipe, best
make | 12/- „ |
| „ 828.—Glass, with Vulcanite Mounts and
Nickel-plated Piston | 13/- „ |
| „ 829.—All Vulcanite | 13/- „ |

COMPRESSED
CHLORATE
OF POTASH.

In Tin Boxes with Leather
Labels, 40 Pellets, about, in
each Box.

1s. 6d. per Dozen Boxes.

17s. Od. per Gross.

1 lb. Bottles, **2s.** 1b.

ANY FORMULÆ MADE
UP IN PELLETS AT
SHORT NOTICE.

FULLER'S EARTH.

In elegant Decorated Tin Boxes, which may be used as Puff Boxes when empty.

No. 626.—1 dozen on cartoon, 3/- doz.

May also be had filled with Violet Powder, No. 626v, 3/3 doz.

No. 748.—**NAIL FILES**, Real Ivory, 1 doz. assorted on Card,
3/- doz.

PLEASE CALL AND SEE OUR SHOW ROOM, WHICH IS FULL OF NOVELTIES!

IN ORDERING KINDLY STATE NUMBERS TO AVOID MISTAKES.

QUOTATION for all SUNDRIES on APPLICATION. SPECIAL PRICES for LARGE QUANTITIES.

HOCKIN, WILSON & CO.

13 to 16 NEW INN YARD, 186a TOTTENHAM COURT ROAD, LONDON, W.;
And 64 Corporation Street, MANCHESTER.

Oyez! Oyez!! Oyez!!!



THIS ELEGANT BISCUIT-CHINA FIGURE, AN ORNAMENT TO ANY SHOP,

GIVEN AWAY

To Purchasers of 25/- worth of

SHIRLEY'S A1 BRAND MENTHOL

OR TWO IF 40/- ORDER IS PLACED.

The following special parcels have been arranged to suit all classes of trade:—

PARCEL 1. 25/- 4 doz. 2d. 1 doz. 3d. 2 doz. 3½d. 3 doz. 4d. 2 doz. 6d.	PARCEL 2. 25/- 4 doz. 6d. 2 doz. 4d. 1 doz. 1s.	PARCEL 3. 25/- 3 doz. 3d. 2 doz. 1s. 1 doz. 4d.	PARCEL 4. 25/- 1 doz. 9d. 2½ doz. 1s. ½ doz. 1s. 6d.
PARCEL 5. 40/- 4 doz. 2d. 2 doz. 3d. 3 doz. 3½d. 5 doz. 4d. 4 doz. 6d.	PARCEL 6. 40/- 5 doz. 6d. 3 doz. 4d. 2½ doz. 1s.	PARCEL 7. 40/- 4 doz. 6d. 4 doz. 4d. 1 doz. 9d. 2 doz. 1s.	PARCEL 8. 40/- 4 doz. 1s. 2 doz. 9d. ½ doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield an average profit of 80 per cent. to the retailer on his outlay.

Numerous letters have been received already, testifying to the satisfaction given by this little figure. One firm writes—"We have just received the figure, and must indeed say we are highly pleased with it, and have it in a prominent place on our counter." Another writes—"It is quite the centre of attraction of my establishment." Another—"Figures sold a dozen cones first day of showing them."

A1 COCAINE & MENTHOL TOOTHACHE TUBE. 6d.

12 ON A CARD. 3/6 DOZ.

Sells really well.

A1 CORN & WART TUBE, 6d.

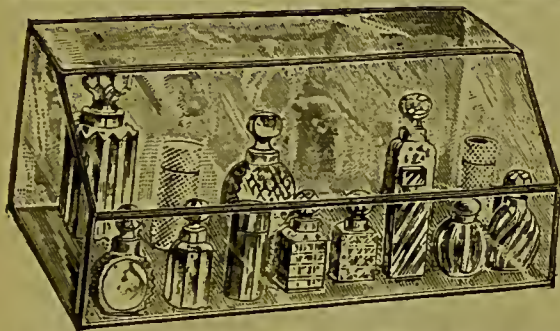
12 ON A CARD. 2/3 DOZ.

JUST IN TIME FOR THE SEASON.

The Chemist and Druggist says:—Mr. Arthur W. Shirley has produced a very attractive biscuit china figure, represented in the annexed engraving. The advertisement is effective without being at all vulgar, and the little orier, we expect, will soon be a familiar figure about the country.

A1 TOOTH SOAP,

Red or White, fragrant and cleansing, put up in hinged metal boxes, 3/9 dozen.



OVER 100 PATTERNS TO CHOOSE FROM.

CUT-GLASS & OTHER SMELLING BOTTLES.

NOW IS THE TIME TO BUY.

- Chemists often find a difficulty in selling these goods for want of a proper display being made, and to meet this a handsome GLASS SHOW CASE, with mirror back, and lined with velvet, will be given away to purchasers of £1 worth of bottles. The case, which opens at the back, so that the goods can be got at from the counter, is not too large, but just a handy size. Buyers can choose their own assortment, but if left open can rely upon saleable ones only being sent.

	Per doz.
No. 3.—Small Handy Watch	5/9
„ 20.—A Bottle that always plases.....	5/3
„ 78.—Beautifully cut, highly polished ..	5/-
„ 13.—A very saleable Bottle, large Watch	6/-
„ 35.—Tube Shape, octagon cutting	6/3
„ 14.—Octagon cut, square stopper	5/-
„ 59.—Substantial Toilet Pattern	7/3

Special terms to Wholesale Buyers.

A FIRST-CLASS 6d. STOPPERED LINE.

Watch Shape.

Octagon cutting.

3/6 dozen.

33/- per gross.



No. 40.

Filled with
Sponge,
Ammonia, and
Scent.

12 in a box.

4/- dozen.

45/- per gross.

	Per doz.
No. 8.—Large Watch, cut edges	6/6
„ 77.—Globe Pattern	5/-
„ 71.—Handsome Bottle, English stoppered	6/-
„ 50.—Rich Pattern, wavy cutting	6/6
„ 102.—Barrel Shape, wide mouth.....	7/6
„ 33.—Pretty Pattern, wide mouth.....	6/6
„ 11.—Large Toilet, polished stopper....	18/-

Write for quotations.

No. 1.—THE NICKEL CAPPED BOTTLE OF THE SEASON, bound to sell by grosses if a good display is made, being lined with strongest Ammonia, and agreeably perfumed. Put up 12 in a hinged partition show box, 2/- doz., 20/- gross. This Bottle can be had with a mirror on instead of label, 2/6 doz., 26/- gross. Special quotations for 5, 10, and 20 gross lots, delivered as required, so as to be fresh.

ARTHUR W. SHIRLEY, 30 PATERNOSTER SQUARE, LONDON, E.C.
And 11 & 12 ROSE STREET, NEWGATE STREET, E.C.

HORN & SON.

OFFICES FOR BRITISH AND FOREIGN

PATENTS AND TRADE MARKS,
SOMERSET CHAMBERS, 151 STRAND, LONDON
(NEXT TO SOMERSET HOUSE).*Bulds to New Patent Law and Registration gratis.***PRECIPITATED CHALK,** WHITEST AND PUREST.CHEAPEST SELLERS IN THE MARKET.
ALSO CHEMICALS, DRUGS AND OILS.APPLY TO
AUG. LEVERMORE & CO.,
8 LIME STREET LONDON, E.C.**EMP. CERAT. SAPONIS.**

ON FINE SHIRTING, 16 IN. WIDE.

6s. per Dozen net cash.

JOHN QUILLIAM & CO., Plaster Works, Manchester.
Cowburn Street, [1]**FOUND DEAD**

BY SANFORD'S RAT POISON.

"I have found 145 rats killed in my farm buildings by it."—C. Wilson Offord.
"It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 300 rats from one dressing with it."—C. Cook, Grange Farm, Ellesmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 3s., of Chemists.
SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 23 years. In packets 3d., 6d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. Liberal terms to Chemists. Wholesals of Barclay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).

A LARGE DEMAND IS BEING CREATED FOR
"DEVONSHIRE CREAM" OINTMENT

Made from Pure Cream.

Chemists, &c., please write for Framed Showcard and Counter Bills, gratis.
Pots, 1/1½; Wholesale, 9/6 per doz.; Cash discount, 7½ per cent.
Carriage Paid on boxes containing 3 dozen and upwards. Agents required every-where, Special Terms.**CHAS. FORTESCUE & CO.,** SOLE PROPRIETORS, PLYMOUTH, DEVON.
Sole Wholesale Agents for London—
ROGERS, EAMES & CO., 16 BOROUGH HIGH STREET, S.E.**FRED^K FINK & CO.,**

10 & 11 MINGING LANE, LONDON, E.C.

SPECIALITIES: Glycerine—Gum Arabic—Gum Tragacanth—Pure Beeswax—Honey—Vanilloes.**S. SAINSBURY'S**Prepared from the finest
English Lavender and
other most choice Scents.**Lavender**

176 & 177 STRAND, LONDON.

*Wholesale and Shipping terms on application.***Water.****TO LET.**

THE MANCHESTER MAKERS OF

METH. SPIRITEstablished
1840.

AND FINISH.

J. & D. MACNAIR & CO.,
29 Robert St., and Bridgeton,
MANCHESTER, and GLASGOW.

IMPORTERS OF

SHELLAC, GUMS, ETC.*Send for prices and samples.***ORANGE WINE**

(VIN. AUBANT, P.B.)

Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export, as it will keep good in any climate. In casks, 13, 27, 56, 112, 140 gallons; small casks 3s. 9d. per gall., carriage allowed. In wine bottles (not less than 3 doz.), at 9s. per doz., including bottles. Cases extra and returnable.

*Sample six stamps. Special quotations to large buyers.***GEO. DURRANT & CO.,** Hertford.**Critchley's
Starch Gloss**

Makes Starched Linen like new. Does not stick to spider-like Materials. Once tried always wanted. Used in the Royal Laundries. Sold every-where, in Packets, 1d., 3d., 6d., and 1s. each. Write for quotations.

Prepared only by
T. CRITCHLEY,
BLACKBURN, and
1 & 3 Australian Avenue,
LONDON, E.C.**The Mormon Elder's****DAMIANA WAFERS**THE MOST POWERFUL
INVIGORANT
EVER PRODUCED.

Permanently restores those weakened by early indiscretions, imparts youthful vigor, restores vitality, strengthens and invigorates the BRAIN AND NERVES. A positive cure for IMPOTENCY and Nervous Debility. *Prompt, Safe, and Sure.* 4/6 per box, 6 for 22/6. Usual discount to the Trade. Send for Circular.

F. B. CROUCH,202 Grand Street, New York City;
London Depot, 51 Strand, W.C.Hovenden & Son, Sanger & Son,
Barclay & Sons, Edwards & Son, and
all Wholesale Druggists.**E. BRAMWELL & SON, ST. HELENS, LANCASHIRE.****EPSOM SALTS (PURE).****CREAM CAUSTIC SODA.**
SULPHITE OF SODA

(PHOTOGRAPHIC AND COMMERCIAL).

GLAUBER SALTS.**PORT OF CARDIFF.****KERNICK & SON,**WHOLESALE DRUGGISTS, &c.,
COMMISSION AGENTS
NEW STREET, CARDIFF.

CORRESPONDANCE FRANÇAISE.

QUIBELL'S**"NOTED" SHEEP DIPS.****"INFALLIBLE" DISINFECTANTS.**

MANUFACTORY:—NEWARK-ON-TRENT.

WITH view to succession; South or South-East Coast, or town in Southern Counties; net profit about £400. "Chemist," 31 Lincoln Road, Horncastle.

JUNIOR; aged 21; 5 years' experience; abstainer and prescriber; references; disengaged soon; English. "Extraotor," care of Portis, 180 Gallowgate, Glasgow.

LONDON.—Junior Assistant or Dispenser, outdoors; two evenings free; aged 21. B., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ADVERTISER (22) seeks situation in Patent Medicine or Sundries house; 6 years' good references. "Zylo," 170 Lorrimore Road, Kennington Park, S.E.

BRANCH Manager or otherwise; good experience and references; successful as Branch Manager; qualified. W. Jones, 4 Suffolk Place, Pall Mall, London, W.

WHOLESALE.—Ten years' experience in Drug and Chemical trade; 2 years as Warehouseman; would not object to go abroad; highest references. Matthew, 20 Hamfrith Road, E.

BRANCH Manager or Assistant, outdoors (25); good references; careful dispenser, good salesman; anxious for permanency; country preferred. F. Bustard, 192 Uxbridge Road, W.

AS Manager or Assistant, with view to succession; Agricultural or Mixed business; Devonshire; disengaged shortly. "Minor," Mr. Ellwood, 46 St. Mary's Terrace, Paddington, W.

A GERMAN Pharmacist's Assistant, who speaks English, desires to meet with a similar engagement in England. Please address, A. H. 114, c/o Messrs. Haasenstein & Vogler, Dresden.

TO Wholesale Druggists.—Traveller, with good connection in several counties, wants engagement immediately; first-class references from provincial house. 3/35, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

QUALIFIED Young Man, aged 26, thoroughly understanding the London trade, will give assistance in the evening for partial board and lodging; in small family preferred. "Dispenser," 7 Lower Terrace, Notting Hill, W.

GENTLEMAN, having a large and old connection with chemists through the South Coast, West of England, South Wales, and Midlands, willing to take several commissions from first class houses with references. Address, E. H., 57 Cranmer Street, Nottingham.

A GERMAN Druggist, speaking French fluently, and experienced in German and French dispensing, the Drug trade, correspondence, &c., requires a situation as Improver in July; aged 22; excellent references. Address, G. Kurze, Elève en pharmacie, Audincourt (Doubs), France.

TO Manufacturers and Wholesale Houses.—Experienced Traveller, just resigning agency for a speciality, is desirous of representing a good firm in sundries, &c.; calling on chemists, druggists, grocers, and stores, London and suburbs. Address, J. W. K., 28 Windsor Road, Holloway, N.

YOUNG Lady desires employment as Clerk; 8 years' office experience, and has been for a considerable time employed in the office of a large firm of wholesale druggists and manufacturing chemists; certificated bookkeeper, good knowledge of French; excellent references; moderate salary. Address, R. D., 36 Blakesley Street, Commercial Road, E.

MANAGER (Branch or Department); qualified by exam.; aged 39; married, two children, youngest 9 years; London or about 50 miles preferred; if branch, indoor; experienced prescriber; strictly reliable and sober; several excellent testimonials; two businesses creditably managed until sold; Continental, London, Brighton, and Agricultural experience. Keeley, 75 Hill Street, Peckham.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

See Notice on Front Page of Supplement.

AN old-established Firm, doing business with Wholesale Druggists, Surgical Instrument Dealers, India-rubber Houses, &c., are prepared to act as Sole London Agents to a Country, Continental, or Colonial Manufacturer (who has not a London Depot), or Buying Agency undertaken on the best terms; references. Apply, in confidence, in first instance, "Agents," care of Clarke, Son & Platt, 85 Gracechurch Street, London, E.C.

NOTICE IS HEREBY GIVEN that MESSRS. HERTZ & COLLINGWOOD have ceased to act as Agents for Messrs. J. Jensen & Co. (Limited), and that in future all communications must be addressed to
J. JENSEN & CO. (LIMITED),
109 Fenchurch Street, London, E.C.

THE FLY CEMETERY, or Honey Fly Gum Paper.—To Agents and Wholesale Houses.—We are desirous of widely extending the sale of the above useful novelty, which has had an immense success wherever introduced, and can offer liberal terms. Apply to Tunbridge & Wright, Manufacturing Chemists, 83 and 84 Broad Street, Reading. For testimonials see issue of May 18, 1889, page 25.

VERY ATTRACTIVE!!!—Convert your shops into elegant pharmacies by advertising your specialities on "Lovely Little Landscapes," painted on opal, with pink or blue advertisements, any wording; example, "Brooks's Pink Perles cure Indigestion," size 6 in. by 5, washable, 2s. 6d. each, 6 for 12s. 6d. post free; local scenes can be reproduced; nothing hitherto will bear comparison. Tom Brooks, Park Pharmacy, Hornsey, N.

"THE PRESENT SUCCESS."

GLYCERINE SUPPOSITORIES (new remedy for Constipation); sell well and yield handsome profits; working formula for 2s. 6d. P.O.; samples 9d. a dozen, or 8s. a gross, post free. G. T. Laurence, 9 High Street, Wood Green, N.

PRELIMINARY AND MINOR.

ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 32 Pupils passed the last Examinations.

STUDENTS' AIDS TO EXAMINATION.

PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Caesar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. MINOR.—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.

OUR WEEKLY SUPPLEMENT.

We have prepared a set of forms for small advertisements (assistants wanted, businesses for disposal, exchange column, &c.). With these are attached tables of useful reference matter (Sale of Poisons, Postal Information, Annual Licences, Metric Weights, Measures, Medicine Stamps, Law and Public Offices, &c.). We shall be glad to send one of these sets to any subscriber who will send us an addressed postal wrapper (bearing a halfpenny stamp). As the object of this production is to encourage the insertion of such advertisements as we have named in THE CHEMIST AND DRUGGIST, we hope this offer will be taken advantage of chiefly by those subscribers who are willing to use this journal whenever opportunities occur.

OFFICES: 42 CANNON STREET, LONDON, E.C.

THE SUMMER ISSUE

OF

The Chemist and Druggist

TO BE PUBLISHED ON

JULY 27, 1889,

WILL BE DISTRIBUTED TO ALL THE CHIEF BUYERS OF

DRUGS,
CHEMICALS,

DRUGGISTS' SUNDRIES,
PERFUMERY,

GLASSWARE,
AERATED WATER PLANT,

&c., &c., &c, in

THE UNITED KINGDOM,

INDIA,

SOUTH AMERICA,

THE AUSTRALASIAN COLONIES,

SOUTH AFRICA,

CHINA,

CANADA,

THE WEST INDIES,

JAPAN,

AND WHEREVER THE BRITISH FLAG CARRIES THE MERCHANDISE OF THE EMPIRE.

DISTRIBUTION OF CIRCULARS.

As the issue dated as above will be sent by book post, it will be available for the distribution of Private Price Lists and Circulars **STITCHED UP WITH THE JOURNAL**. As this is by far the most effective and economical method of distributing a Circular, particular attention is directed to the opportunity.

COMPARE THE COST OF

Sending a four-page circular through the post,
say, 7,000 in the United Kingdom and
4,000 abroad (of which some 2,000 go at
higher rates of postage).

Postage, say £27 1 8
Wrappers and addressing, say ... 5 0 0

£32 1 8

Sending such a circular stitched up with

THE CHEMIST AND DRUGGIST.

One net cost £11 0 0

Not only does this represent a great saving in money, but the circulation along with a well-established journal ensures more attention, more permanence, and more effect.

The "Chemist and Druggist" is supplied regularly, by Official Contracts with the respective Councils, to every Member of

The Pharmaceutical
Society of New South
Wales.

The Pharmaceutical
Society of Queens-
land.

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TARIFF FOR THE INSERTION AND DISTRIBUTION OF 11,000 CIRCULARS.

Two pages (1 leaf), £8 5s. net. | Four pages (2 leaves), £11 net. | Eight pages (4 leaves), £16 10s. net.

These may be printed on paper of any tint, but the pages must be of the size of those of "THE CHEMIST AND DRUGGIST," and each page must be headed, "The Chemist and Druggist, July 27, 1889." They must be delivered to us, folding singly (or otherwise folding will be charged for), not later than July 22, 1889.

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MORPHIÆ HYDROCHLOR.

In powder and crystals.

MORPHIÆ ACETAS**MORPHIÆ TARTRAS**Introduced by us and specially prepared
for hypodermic treatment.**CODEIA****APOMORPHIÆ MUR.****ALOIN****RESINA SCAMMONII****JALAPINE****SALICINE****CHLOROFORM PURE****CHLOROFORM METH.**Our brand has been for many years known to
the Wholesale Trade as absolutely pure.**GINGERINE****CAPSICINE****CAMPHOR MONOBROM.**

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NEW YORK Office—20 Cedar Street: FRAS. JAS. MACNAUGHTAN, Agent. [1]

ALL PURCHASERS OF

HOMOEOPATHIC

MEDICINES AND PREPARATIONS

SHOULD WRITE TO

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(LATE MANAGERS TO ASHTON & PARSONS),

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FOR PRICE-LIST BEFORE ORDERING ELSEWHERE.

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THE "ACME" AGENT'S CASE*Is made in Mahogany, Walnut, Ebony, or Oak, to correspond with Shop Fittings, and is the most unique and attractive Show Case extant.*

£3 3s. net. Retail value of Contents, £9.

ADVANTAGES.

"THE ACME" affords the Best Display of Medicines.

"THE ACME" occupies Little Space, measuring at base 20 x 8 in.

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"THE ACME." Every Space is labelled for its respective Medicines.

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15 PRINCE OF WALES' ROAD, NORWICH.

ST. GEORGE'S AND BANK PLAIN,
NORWICH.**To the CHEMISTS & DRUGGISTS of the UNITED KINGDOM.**

GENTLEMEN,—We beg respectfully to inform you that we have brought out a **LIEBIG'S EXTRACT OF MEAT AND MALT WINE** made with a **HIGH-CLASS BRITISH WINE**, which can be sold with a Sweets Licence, which costs only £1 5s., and can be obtained in **SCOTLAND** and **IRELAND** without a Magistrates' Certificate; in England this Certificate is required, but as you will see by the following Extract from a letter received January 17, 1889, from the Inland Revenue Authorities, it is not necessary to wait till the Licensing Sessions to obtain the Licence, but that the Board will, on production of a recommendation of two of the Licensing Magistrates in the district where the Trader resides, be prepared to grant permission for the immediate sale of the Wine.

EXTRACT FROM LETTER:

"I am directed by the Board of Inland Revenue to acknowledge the receipt of your letter of 11th inst., and to state, in reply, that in cases where a person is desirous of selling Wine not to be consumed on the premises, although the Magistrate's Certificate has not been obtained, the Board would be prepared to consider favourably an application from the Trader to be allowed to sell, pending the next Meeting of the Licensing Magistrates, upon his depositing with the Collector the amount of Licence due, and producing a recommendation in writing from two of the Licensing Magistrates."

We offer to pay the entire cost of the Licence where it is not held if an order is sent us for 4 dozen of the 2/9 size, or 2 dozen 2/9 and 1 dozen 4/6; this we will forward carriage paid to any Railway Station in Great Britain.

Over Two Thousand Testimonials have been received from Medical Men, and the Wine has now an immense sale throughout the United Kingdom.

Soliciting your commands, we are, dear Sirs, Yours most obediently,

COLEMAN & CO., LIM.

P.S.—Please note that a Magistrates' Certificate is not required for Scotland and Ireland, and for England permission can be obtained for the immediate sale of the Wine with very little trouble and no expense to you, as we offer to pay the entire cost of the Certificate.

THE NEW FOOD WARMER. SIMPLE, SAFE, AND CHEAP.

BLACKBOURN'S
INFANT'S FOOD WARMER

1/6

Complete, or with Special
Earthenware Food Pan,

1/9.



1/6

Complete, or with Special
Earthenware Food Pan,

1/9.

Protected under Patent No. 6991.

REQUIRING ORDINARY NIGHT LIGHT ONLY.
SPECIAL NOTICE TO THE TRADE.

Since the above Food Warmer was first introduced the following improvements have been added, for which provision was made in Patent Specification:—

- 1.—A strong RIM has been added to the cylinder, thus strengthening the gauze, and also preventing the Pan from being upset.
- 2.—The Food Pan now has affixed to it a small cup-shaped Handle in place of the former long one, thus making the article more compact.
- 3.—A highly-finished Food Warmer, with special EARTHENWARE Pan (in place of Tinware), is now supplied to retail at 1/9 complete.
- 4.—Earthenware Pans can be supplied separately, to retail at 6d. each.

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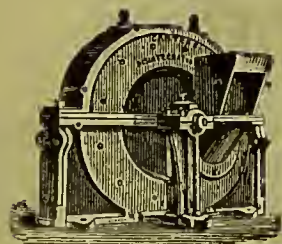
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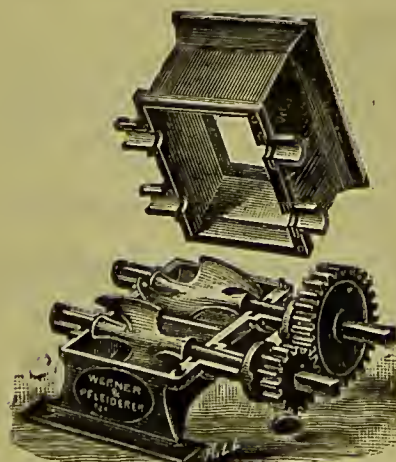
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For Grinding Sugar, Bark, Linseed, Ginger, Pepper, Spices, Salt, &c., this Machine is invaluable.
Made in 9 Sizes. Illustrated Catalogue may be obtained on application.

Samples of ANY Material will be Ground free of charge.

J. HARRISON CARTER, 82 Mark Lane, LONDON, and 3 Rue du Louvre, PARIS.

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Size 3, Type I, for 1-lb. Mass.
108THE "UNIVERSAL"
KNEADING AND MIXING MACHINE
FOR
PILL MASS MAKING,ALSO FOR
Horse Balls, Tooth Pastes, Ointments, Soaps, Powders, and for
general Mixing and Incorporating.

REPLACES WITH ADVANTAGE ALL OTHER APPLIANCES FOR THESE PURPOSES.

Made in various sizes, to do from 1/2 lb. up to 1 ton at a time.

WERNER & PFLEIDERER, 86 Upper Ground St., LONDON, S.E.
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Registered Trade Mark—"SANITAS."
Telegraphic Address—"SANITAS LONDON."
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Letchford's Buildings,
Three Colt Lane, Bethnal Green,
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GOLD MEDALS:

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"SANITAS" Disinfecting Fluid.
"SANITAS" Disinfecting Oil.
"SANITAS" Disinfecting Emulsion.
"SANITAS" Crude Disinfecting Fluid.
"SANITAS" Insecticide and Liquid Soap.
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"SANITAS" Antiseptic Toilet Fluid.
"SANITAS" Disinfecting Powders.
"SANITAS" Antiseptic Tooth Powder.
"SANITAS" Antiseptic Toilet Powder.
"SANITAS" Disinfecting Bar Soaps,
No. 1 and No. 2.
"SANITAS" Disinfecting Soft Soaps,
No. 1 and No. 2.
"SANITAS" Antiseptic Toilet Soap.
"SANITAS" Disinfecting Family Soap.
"SANITAS" Brown Windsor Soap.
"SANITAS" Animal (Soft) Soap.
"SANITAS" Dog Soap.
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"SANITAS" Air Purifier.
"SANITAS" Urinal Tablets.
"SEA-WATER SANITAS."
"SANITAS" Disinfecting Saw Dust.
"Kingzett's Bactericides."

LETTER TO THE TRADE.

GENTLEMEN,—

We are constantly receiving complaints from all parts of the country that certain of the "SANITAS" preparations cannot be obtained at local Chemists and Druggists', and, in consequence, *we are forced, against our wish,* to execute many orders direct from our works.

We give good discounts to the Trade, and our preparations are extensively advertised; it is, therefore, in the interest of the Trade to keep stock of all our retail articles, and we earnestly ask Chemists and Druggists to do so.

THE "SANITAS" DISINFECTANTS HAVE, WE BELIEVE, THE LARGEST SALE IN THE WORLD,

and we wish the Trade to participate in our success by reaping a share of the advantages gained for our unrivalled preparations by judicious advertisements.

Trade rates and discounts will be furnished on application, and orders may be placed with any of the Wholesale Houses.

Your faithful servants,

The Sanitas Company, Limited.

C. T. KINGZETT,

Managing Director.

N.B.—We have a very effective Transparency, excellently Coloured Lithographed Cards, and Illustrated Handbills printed on one side only, now ready for distribution.

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BRONZED HOLDERS (Quality A) 18/-
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ROLLS SANITARY PAPER (Extra Quality) 5/3 55/-
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**Perforated Sanitary & Toilet Papers.****HOLDERS.**

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ROLLS PERFORATED SANITARY PAPER 6/9 69/-
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Patentees & Sole Manufacturers of Sanitary Paper and Holders,

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NEW DESIGNS IN COUNTER BILLS,

Printed in Colours, on White and Coloured Paper, for Chemists' Advertising. A Great Novelty.

ORDINARY COUNTER BILLS,

On GOOD WHITE PAPER, at LOWEST PRICES ever offered.

10,000 CROWN OCTAVO BILLS (7½ in. x 5 in.) 12/0

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ALL OTHER SIZES AT EQUALLY LOW RATES. SAMPLES AND PRICES ON APPLICATION.

CABINET PAPER,

For the Water Closet. In Registered Shape Boxes and in Packets. Samples and Prices on application.

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Druggists' Price Book.**

By D. ELLIOTT.

NEW EDITION, revised according to the British Pharmacopœia, 1885.

Pocket Size. Bound in Leather. Price 3s., Post Free 3s. 2d.

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FREE BY POST.

**The Clinical Clerks' Guide
to Urine Testing.**

On 8-fold linen-lined card, 9 in. by 5 in.

Price 7d., Post free.

SILVERLOCK'S**CHEMISTS' COUNTER BILLS**

Good QUALITY, 7½ x 5 — — — 10,000, 15/ | Second QUALITY, 7½ x 5 — — — 10,000, 12/6
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FROM 1/ PER 1000; A REDUCTION ON LARGE QUANTITIES.

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COPPER-PLATES FOR SLIP AND DISPENSING LABELS ENGRAVED FREE OF CHARGE.

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BELLOWS'**Concentric Calculators.**

A new and simple mode of ascertaining equivalents without the working of decimals, requiring no writing except the answer. Series A, for the conversion of Weights and Fluid Measures of the Metric System into English. For the use of Medical Students, Chemists, &c.

Price 3s. 2d., Post free.

H. SILVERLOCK,

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**Analytical Exercise Forms
for Chemical Students.**

Arranged by H. BELCHER THORNTON.

Price 8d. per dozen Forms, Post free.

SPECIAL.**INDIARUBBER POROUS PLAISTERS**

Manufactured by WILLIAM MATHER.

REDUCTION OF PRICES.

STRENGTHENING	...	...	...	...	2s. per dozen.
BELLADONNA	...	...	...	...	2s. „
CAPSICUM	...	...	...	...	2s. „

Subject to Discount, as per Price List.

WILLIAM MATHER,

Proprietor of the Royal Balsamic Plaisters and other Specialities,

DYER STREET, HULME, MANCHESTER.

London Agents—MACE & HALDANE, 94 Milton Street, E.C.

FOR THE NURSERY, INFANTILE ECZEMA, CHAPS, HERPES.

A. M., Esq., L.R.C.P.Ed., Kirkoswald, R.S.O., Cumberland, reports:—"Vinolia has proved very satisfactory in my practice; in the nursery it is simply invaluable."

J. M. B., M.B., Esq., Mast.-Surg., West Cromwell Road, London, W., reports:—"I prescribed 'Vinolia' for a lady, who is a victim to irritation of the skin on face and hands, occasioned, she says, by the use of all or any perfumed soaps. This lady gives it unqualified praise as a soothing application in this way."

W. H., Esq., M.R.C.S., & Co., South Street, St. Andrew's, N.B., reports:—"I have found 'Vinolia' a most useful application in skin affections. It is the most agreeable application with which I am acquainted, soothing, and not sticking like most ointments. I found it most useful in a case of intertrigo and also for chapped hands."

S. O., Esq., M.R.C.S.E., Maddox Street, London, W., reports:—"In an adult with gouty Eczema, and for roughness of the skin in a little child, 'Vinolia' has proved eminently successful."

A. K. T., Esq., M.D., Newton Terrace, Glasgow, reports:—"No topical application I have met with in this country or the Spas of Germany, in a long experience, can compare with 'Vinolia' in Eczema and other Red or Tender conditions of the Skin."

"VINOLIA" SOAP

contains an excess of saponifiable
fat instead of free alkali.

THE IMITATING SPIRIT.

A soap firm writes us:—"One of our customers, a chemist of some importance, wrote us this morning, urging us to bring out a Soap to compete with BLONDEAU'S 'VINOLIA' SUPERFATTED SOAP, which, he said, was beautiful."

8th January, 1889.

TWO OR THREE REPORTS.

B. B., Esq., M.R.C.S.E., Crumlin, co. Antrim, reports:—"I gave 'Vinolia' Soap to a young lady who was much annoyed by redness and roughness of the skin of her hands. A very few days after she commenced using the Soap a considerable improvement appeared, and her hands are now soft and white and in a natural condition."

J. L. J., Esq., M.R.C.S., Cape, Surrey, reports:—" 'Vinolia' Soap is of a peculiarly pleasant softening nature, and has kept my hands free from redness and chapping better than any other soap I have ever used."

W. T. P., Esq., M.R.C.S.E., Albany Road, Camberwell, reports:—"The skin of my hands always chaps with other soaps in the winter, but 'Vinolia' Soap has kept them in the very best condition."

PRICES.

"VINOLIA" (for Eczema, Pruritus &c.), 1s. 9d. and 6s. per box.

"VINOLIA" CREAM SOAP (Medical), 2s. per box of 3 Tablets.

"VINOLIA" CREAM SOAP (Toilet), 2s. 6d. per box of 3 Tablets.

TERMS TO CHEMISTS.

"VINOLIA" SOAP (Medical), under 1 doz., 20s.; 1 doz. and upward, 18s. 4d.

"VINOLIA" SOAP (Toilet), under 1 doz., 24s.; 1 doz. and upward, 22s. 10d.

"VINOLIA" (Small Size), under 1 doz., 18s.; 1 doz. and upward, 16s. 9d.

"VINOLIA" (Large Size), under 1 doz., 60s.; 1 doz. and upward, 57s. 8d.

"VINOLIA" for dispensing compound prescriptions only, 3s. and 12s. less per dozen on the small and large size respectively.

Agents for BLONDEAU et CIE:—
ROBERTS & CO., 76 New Bond Street, LONDON, W.

THERAPEUTIC PROPERTIES

OF

"VINOLIA,"

A PLASTIC EMOLLIENT CREAM.

1.—"Vinolia" will relieve the intensest itching from any cause whatever, as soon as applied, and is the most elegant cold cream extant.

2.—It will allay irritation and inflammation of the skin when nothing else will, so that it is invaluable in Eczema, Piles, &c. (NOTE.—We have recently heard of a case of Eczema of twenty-five years' standing in which "Vinolia" was employed with perfect satisfaction.)

3.—It is bland and innocuous, and does not "run" like ordinary ointments, so that it is perfectly adapted for cold sores, chilblains, and for gynæcological and rectal troubles, and examinations.

4.—It is a perfect protective and emollient for a tender skin, preserving this tissue from the evil effects of wind, heat, irritating particles, gases, &c. For sunburns, abrasions, and burns generally it is unequalled.

5.—It is an admirable application for the nursery, and there is nothing better to use after shaving. It will relieve the sting of an insect, flea, gnat, mosquito, bee, &c., in an instant.

6.—"Vinolia" contains "Vinolia" basis, a small proportion of a levigated form of zinc, and some innocuous antiseptics.

~~83~~ We shall be happy to furnish medical men any information concerning "Vinolia," with reports, literature, samples, &c.

PRICES.

"VINOLIA" (for Pruritus, Eczema, &c.), 1s. 9d. and 6s. per box.

"VINOLIA" SOAP (Medical), 2s. per box of 3 Tablets.

"VINOLIA" SOAP (Toilet), 2s. 6d. per box of 3 Tablets.

TERMS TO CHEMISTS.

"VINOLIA" SOAP (Medical), under 1 doz., 20s.; 1 doz. and upward, 18s. 4d.

"VINOLIA" SOAP (Toilet), under 1 doz., 24s.; 1 doz. and upward, 22s. 10d.

"VINOLIA" (Small Size), under 1 doz., 18s.; 1 doz. and upward, 16s. 9d.

"VINOLIA" (Large Size), under 1 doz., 60s.; 1 doz. and upward, 57s. 8d.

"VINOLIA" for dispensing *compound prescriptions only*, 3s. and 12s. less per dozen on the small and large size respectively.

BLONDEAU & CIE.

Agents—

ROBERTS & CO., 76 New Bond Street, LONDON;

AND 5 RUE DE LA PAIX, PARIS.

THE CARE OF THE SKIN AND HAIR.

SOAP is, of course, an indispensable requisite in modern daily life among civilised people. Its great usefulness is attested by its having been used for ages. "No rose without a thorn," runs the German adage, and the case is similar with respect to soaps, for, in many cases, their deleterious action more than counterbalances any good they may effect. No more beautiful people, perhaps, ever existed than some of the ancient Greeks and Romans, and it is noteworthy, indeed, that while these grand people sought to keep the skin and hair supple, and to preserve the tone with oil, the moderns, by the daily ablutions with soap and water, extract the oil from the skin. Those who are hardly *au courant* with the subject of soaps must realise, if they will but reflect upon it, that every soap he or she has used has at times seemed to dry the skin and hair. Such dryness is always due to the action of an alkali—to wit, *soda* or *potash*, or both.

"HOW SOAPS ARE MADE."

When an alkali is mixed with a fat, soap, of course, is formed at once. This may be called "PRIMARY SAPONIFICATION." If the soap be allowed to stand, a slow continued reaction lasting several weeks goes on, which may be designated "SECONDARY SAPONIFICATION." If a soap, as *ordinarily made*, contain any oil after the "primary saponification" is over, it will not after a little time lather freely, and will be streaked and become cracked. The result of all this is, that in the soaps everywhere supplied, there is too little fat, and a *great excess of unsatisfied caustic alkalies*. Upon many soaps a white powder (the alkali) may oftentimes be seen to have been "sweated out," as it is called. "*On transparent soaps this can often be seen as a fine bloom-like deposit.*" (*Jamieson.*)

By a new discovery—the greatest ever made in the way of soaps—"Vinolia" Soap is free from the foregoing objections, and yet contains an excess of plastic emollient cream; so that it does not injure the skin.

Further, the process of polishing is the source of a serious objection. In the polishing and high finishing of soaps, the strongest and most condensed alkalies are used to put on the gloss. Thus the already too alkaline soaps are made more alkaline still.

The action of an alkali, be it noted, upon animal tissue is to irritate and destroy it. The presence of any free alkali in a Toilet Soap, especially for a diseased or tender skin, is to be vigorously condemned, and those who regard the care of the "skin and hair" will appreciate most heartily a soap made with an excess of preservable, emollient cream.

There is yet another point: When an ordinary soap (though neutral) is brought into contact with water, it is invariably more or less decomposed, and gives up part of its soda or potash, which in washing extracts the oil from the skin, and causes this tissue to shrivel. Besides containing alkalies, many soaps are contaminated with vermilion, a mercurial compound of chrome red, a preparation of lead and fuchsine, one of the coal-tar colours frequently contaminated with arsenic.

"It is customary to add to soap cocoanut oil to make it lather well, which tends to dry and render brittle the epidermis, so that a real detriment is obtained to gratify a popular prejudice." (*Jamieson.*)

In certain forms of cutaneous disease "the physician's interdict is against the use of soap, the concurrence of the free alkali in which, acting as a powerful irritant, sensibly retards recovery."

The risk of all contingencies is removed by using "Vinolia" Soap, which is a superfatted soap, *i.e.*, a soap containing above the exact amount of fat required for saponification, three or four per cent. of "Vinolia," a plastic emollient cream.

The exact presence of the saponifiable cream covers the alkali, and so prevents a deleterious action upon the skin, thus insuring the emollient properties of the soap for toilet and medicinal purposes. Every other form of soap, it will be observed, dries the skin to a greater or less degree, and removes its oil and suppleness.

A pure saponifiable fat, which presents the most marked advantages over ordinary fats and oils, is employed in making "Vinolia" Soap, and is absorbed by the skin at once, rendering it elastic and supple.

"Vinolia" Soap is cleansing, lathers beautifully, is perfumed with a rare redolent French rose of exquisite fragrance, and is antiseptic, bland, and emollient. It is the loveliest of soaps for an infant's skin—indeed, it is unequalled for the nursery, toilet, and bath. It is *par excellence* the soap for the face, and is most pleasant, grateful, and refreshing for patients to use, and forms a great and happy contrast with the usual injurious saponaceous products. Used in shampooing, it does not whiten the hair, or dry and injure it, causing it to come out; nor does it weaken the scalp.

SUMMING UP.

"Vinolia" Soap is manufactured by an original newly discovered process, and differs from all other soaps, as follows:—

First, in that it contains an excess of saponifiable cream, instead of an excess of alkali, thus allowing for the "Secondary Saponification." *This has never been successfully done before*, and is noteworthy. It is free from extraneous matters.

Secondly, in that when dissolved in water, the presence of the excess of saponifiable cream combines with any alkali set free, and prevents it attacking the skin.

Thirdly, in that it is moulded by compression only, and not polished by subjecting it to the corrosive action of powerful alkalies, in order to make it look better, and wash worse.

Fourthly, in that the presence of the free saponifiable cream acts as a refreshing balm and nutrient tonic to the skin. "Vinolia" Soap is the purest, blandest, and *most truly scientific soap thus far manufactured*, and is the soap those who prize the health of the skin should use.

"Vinolia" (for Pruritus, Eczema, &c.), 1s. 9d. and 6s. per Box; "Vinolia" Soap (Medical), 2s. per box of 3 tablets; "Vinolia" Soap (Toilet), 2s. 6d. per box of 3 tablets.

TERMS TO CHEMISTS.—"Vinolia" Soap (Medical), under 1 doz., 20s.; 1 doz. and upward, 18s. 4d. "Vinolia" Soap (Toilet), under 1 doz., 24s.; 1 doz. and upward, 22s. 10d. "Vinolia" (Small Size), under 1 doz., 18s.; 1 doz. and upward, 16s. 9d. "Vinolia" (Large Size), under 1 doz., 60s.; 1 doz. and upward, 57s. 8d. "Vinolia" for dispensing compound prescriptions only, 3s. and 12s. less per dozen on the small and large size respectively.

Agents for BLONDEAU & CIE: ROBERTS & CO., 76 New Bond Street, London; and Rue de la Paix 5, Paris.

PILES, PRURITUS ANI, etc.

The peculiar sedative action of "Vinolia" which renders this agent so soothing and grateful in irritable and inflamed conditions of the skin likewise renders it equally efficacious and indispensable for *irritable and inflamed piles*. We have before us ample evidence that it will relieve itching (pruritus ani, etc.), the instant it is applied, and numberless physicians inform us that for irritable and inflamed piles it is absolutely unequalled. It is perfectly miscible with all medicaments.

PRICES:—

- "VINOLIA" (*for Eczema, Pruritus, etc.*), 1s. 9d. and 6s. per box.
"VINOLIA" SUPERFATTED SOAP (*Medical*), 2s. per box of 3 Tablets.
"VINOLIA" SUPERFATTED SOAP (*Toilet*), 2s. 6d. per box of 3 Tablets.

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ROBERTS & CO., 76 New Bond Street, LONDON,
AND 5 RUE DE LA PAIX, PARIS.

THE SKIN WITHOUT.

(With apologies to SIR A. P.)

There's a skin without, and a skin within,
A covering skin and a lining skin;
But the skin within is the skin without,
Doubled inwards and carried completely throughout.

The palate, the nostrils, the windpipe and throat
Are all of them lined with this inner coat,
Which through every part is made to extend,
Lungs, liver, and bowels from end to end.

The outside skin is a marvellous plan
For exuding the dregs of the flesh of man,
While the inner extracts from the food and the air
What is needed the waste of the flesh to repair.

Too much brandy, whisky, or gin
Is apt to disorder the skin within,
While if dried with *soap*, the skin without
Refuses to let the sweat come out.

Good people all, have a care of your skin,
Both that without and that within;
To the first give plenty of "**Vinolia**" Soap,
To the last, little else but water, we hope.

But always be very particular where
You get your water, your *soap*, and your air,
For if these be tainted or rendered impure,
It will have its effect on the man, be sure.

The *scap* which will ever for you be the best
Is one WITH FREE FAT, and that's milled and compressed.
The alkaline soaps and the picture-book soaps
Would ne'er be employed by infallible popes.

Your water, transparent and pure as you think it,
Had better be filtered and boiled ere you drink it,
Unless you know surely that nothing unsound
Can have got to it over or under the ground.

But of all things the most we would have you beware
Of breathing the poison of once-breathed air;
When in bed, whether out or at home you may be,
Always open the windows and let it go free.

With clothing and exercise keep yourselves warm,
And change your clothes quickly if caught in a storm,
For a cold caught by chilling the outside skin
Flies at once to the delicate lining within.

All you who thus kindly take care of your skin,
And attend to its wants without and within,
Need not with "**Vinolia**" feel any fears,
For your skin may last you a hundred years.

"**VINOLIA**" itself is a plastic, emollient cream for Eczema,
Pruritus, Pi'es, etc.

Prices:—"VINOLIA" (for Eczema, Pruritus, etc.), 1s. 9d. and 6s. per box.

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